Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Read Me First

Presented by
Robert K. Wysocki, Ph.D.

Introduction

- What is the slide collection
- What's in the slide collection
- How to use the slides

What is the slide collection

- These are the actual slides I use when I teach or train project management from EPM6e.
- Each chapter has its own slide file saved in PowerPoint format for easy revision.
- I use my slides primarily as mental triggers. Some of the graphics remind me of things I want to say.
- When I deliver a lecture I do not have a prepared script. My slides are my script, and I use them to structure my comments to the interests of the students. The result is a very interactive environment.

What’s in the slide collection

- I can’t envision a situation where you would use the slides right out of the box. You will have to revise the slides to align with your lecture preferences.
- Since everyone has their own teaching and delivery style, I encourage you to change the contents to suit your specific needs.
- There is a separate case study slide file. These are easily inserted in the chapter slide files as needed.
- Add your own materials into the slide file.

How to use the slides

- As you plan your lecture, compare the text chapter content to the chapter slides and add notes to each slide.
- Review the case study file and integrate the case exercises into the slide file for that chapter.
- Review the discussion questions and add those you wish to use in class to the slide file at the appropriate place. The discussion questions are excellent conversation starters and that is how I use them.
- If you do revise the slides, please share the changes and rationale with me.

Effective Project Management: Traditional, Agile, Extreme

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Introduction

Presented by
(facilitator name)

Introduction

- Introductions
- Program Overview
- Program Objectives
- Course Learning Objectives
- Course Format
- Course Materials
- What’s Expected of Me?
- Course Outline
- Class Exercise #1: Create the Hot Topics List
- Introduction to the Case Study

Course Learning Objectives

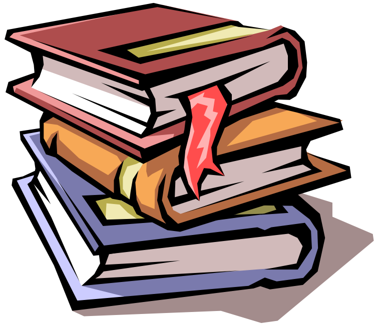
- Have a working knowledge of EPM
- Understand the impact of uncertainty and complexity in project management
- Understand linear, incremental, iterative, adaptive and extreme models of the project management life cycle
- Know how to choose the best-fit model based on project characteristics
- Adapt EPM to the best fit model
- Adapt EPM to the case study

Course Format

- Adaptive
- Interactive
- Discussion- and practice-oriented
- Exercise-driven
- Practice on a case study in a team format

Course Materials

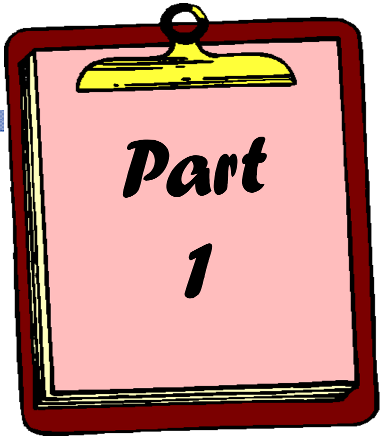
- Wysocki, Robert K., (2011). “Effective Project Management: Traditional, Agile, Extreme, 6th Edition,” (New York, NY: John Wiley Sons)
- Case study materials
- Copies of slide presentation



What's Expected of Me?

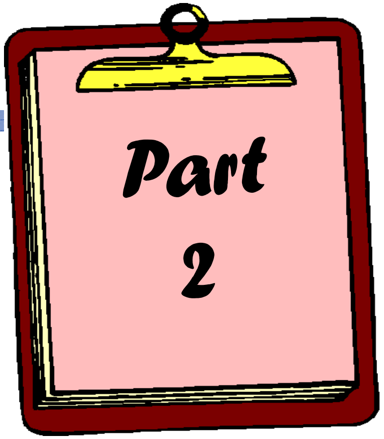
- Be on time
- Be actively involved
- Be committed to your team members
- No side conversations
- No ringing cell phones, pagers, Blackberries, PDAs...
- Have fun!

Course Outline



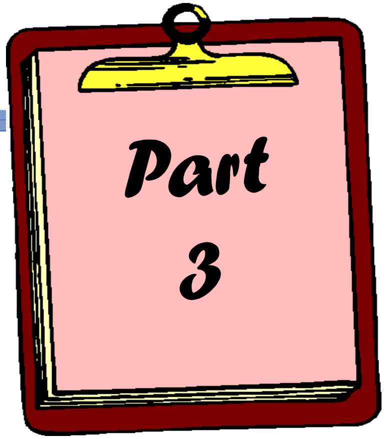
- **Part 1: Defining and Using the Project Management Process Groups**
  - Ch01: What is a Project?
  - Ch02: What is Project Management?
  - Ch03: Understanding the Project Management Process Groups
  - Ch04: How to Scope a TPM Project
  - Ch05: How to Plan a TPM Project
  - Ch06: How to Launch a TPM Project
  - Ch07: How to Monitor & Control a TPM Project
  - Ch08: How to Close a TPM Project

Course Outline



- **Part 2: Establishing Project Management Life Cycles and Strategies**
  - Ch09: Complexity and Uncertainty in the Project Management Landscape
  - Ch10: Traditional Project Management
  - Ch11: Agile Project Management
  - Ch12: Extreme Project Management

Course Outline



- **Part 3: Building an Effective Project Management Infrastructure**
  - Ch13: Establishing & Maturing a Project Support Office
  - Ch14: Establishing & Managing a Project Portfolio Management Process
  - Ch15: Establishing & Managing a Continuous Process Improvement Program

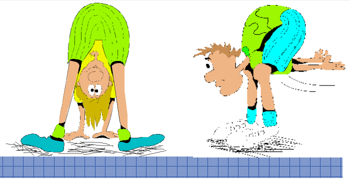
Course Outline

- **Part 4: Managing the Realities of Projects**
  - Ch16: Prevention and Intervention Strategies for Distressed Projects
  - Ch17: Organizing Multiple Team Projects
  - Ch18: Managing the Professional Development of Project Teams

Contemporary Project Environment

- High Speed
- High Change
- Lower Cost
- Increasing Levels of Complexity
- More Uncertainty
- Challenges to Effective Project Management
  - Flexibility and Adaptability
  - Deep Understanding of the Business & Its Systems
  - Take Charge of the Project and Its Management
  - Project Management is Organized Common Sense

Class Exercise #1



Create the Hot Topics List

Here is your opportunity to contribute any topics you would like discussed by the class.

We'll list your contributions and integrate them into the course. As part of our course wrap-up, we will return to the list to make sure all items have been addressed.

Introduction to the Case Study

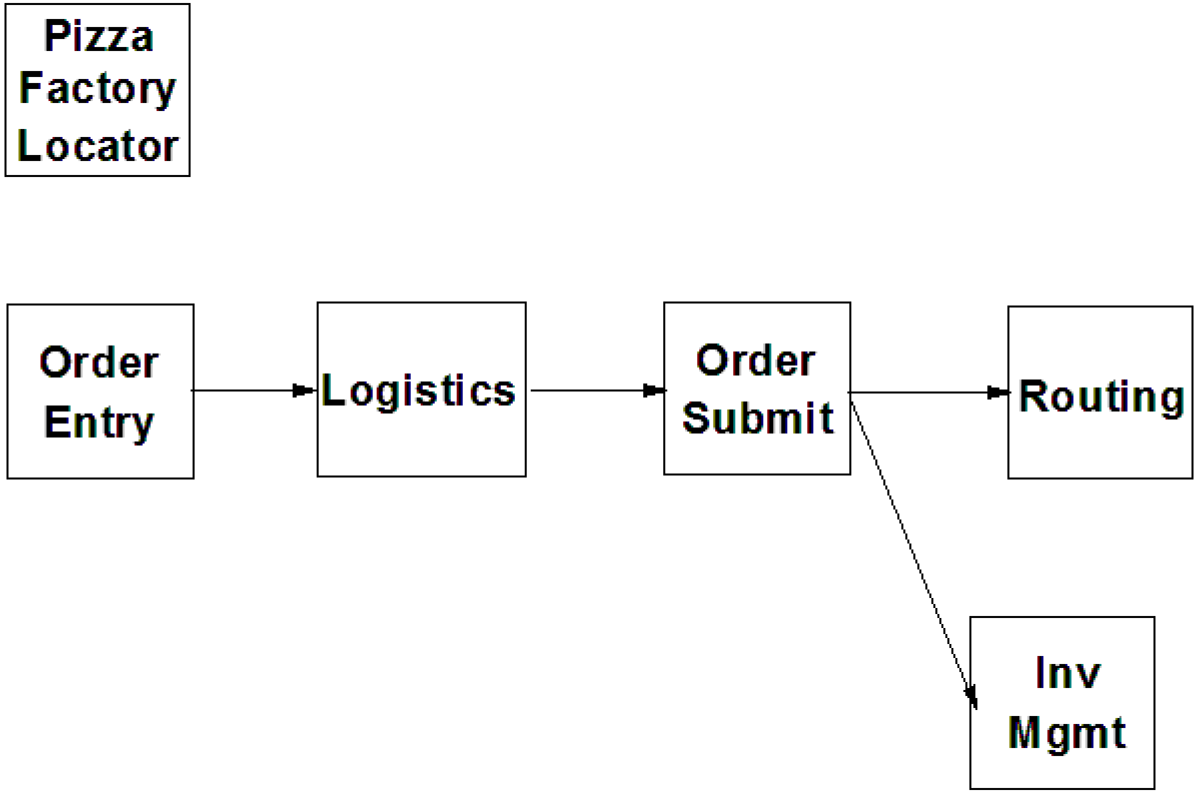
Pizza Delivered Quickly (PDQ)

Read the case study background document. Take notes on any questions you may have.

We will discuss the case study to make sure we are all on the same page.

Introduction to the Case Study

PDQ Sub-system dependencies


Pizza Factory Locator

Order Entry

Logistics

Order Submit

Routing

Inv Mgmt

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch01: What Is a Project?

Presented by
(facilitator name)

Ch01: What Is a Project?

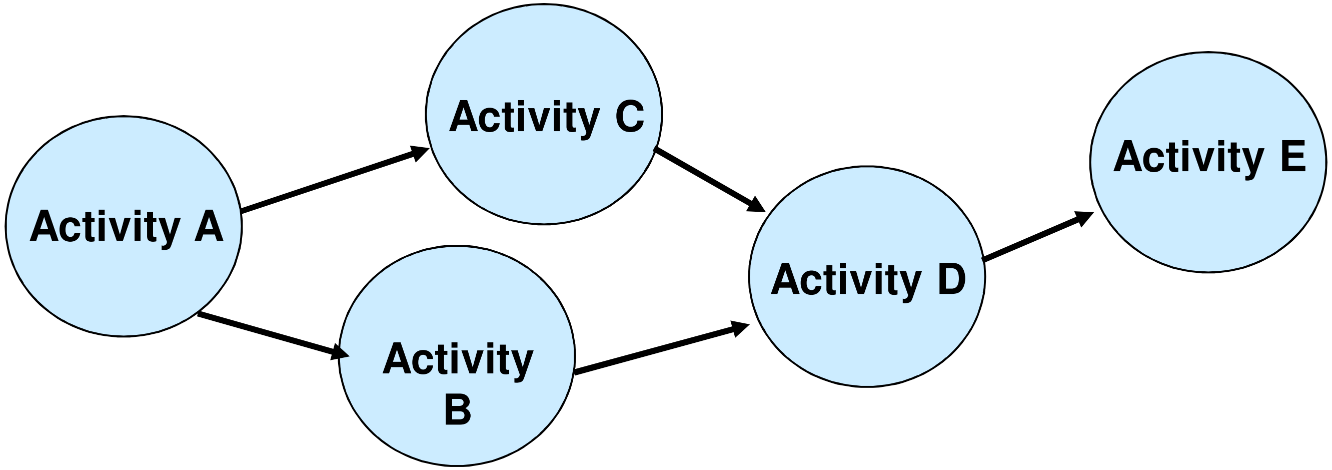
Summary of Chapter 1

- Defining a project
- Defining a program
- Defining a portfolio
- Understanding the scope triangle
- Managing the “*creeps*”
- The importance of classifying projects

Ch01: What Is a Project?

Defining a Project

A project is a sequence of unique, complex, and connected activities having one goal or purpose and that must be completed by a specific time, within budget, and according to specification.



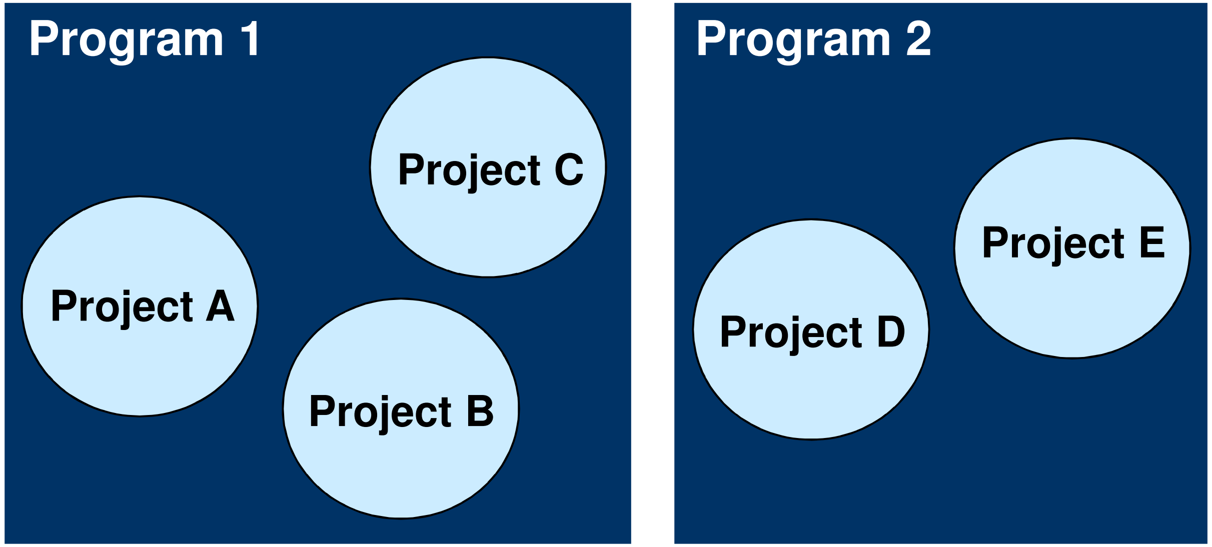
What's missing from this definition?

A Business-focused Definition of a Project

A project is a sequence of finite dependent activities whose successful completion results in the delivery of the expected business value that validated doing the project.

Defining a Program

A program is a collection of related projects that share a common goal or purpose.



Program Offices

- Temporary Program Office
- Permanent Program Office

Defining a Portfolio

A portfolio is a collection of projects that share some common link to one another.

For example,

- Same business unit
- New product development projects
- R & D projects
- Maintenance projects
- Process improvement projects
- Staffed from the same resource pool
- Same budget

Understanding the Scope Triangle

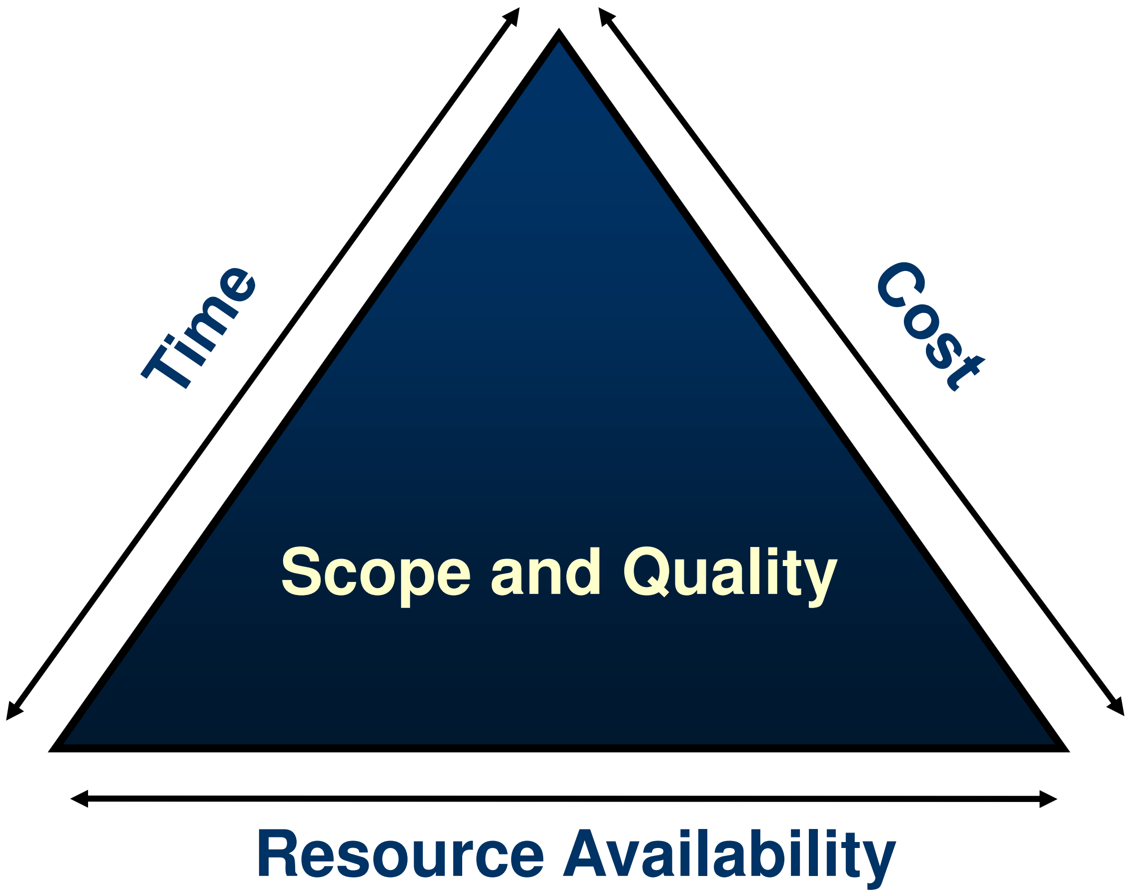


Figure 01-01

Prioritizing the Scope Triangle

Priority **Variable**	Critical (1)	(2)	(3)	(4)	Flexible (5)
Scope				X	
Quality			X		
Time	X				
Cost					X
Resource Availability		X			

Figure 1-2

Applying the Scope Triangle

- The scope triangle is a system in balance.
- The lengths of the three sides exactly bound scope and quality.
- Change in the variables will cause the system to be out of balance
- In such cases use the scope triangle to
  - Build a problem escalation strategy
  - To structure the Project Impact Statement

Creeps to Watch Out For

- Scope Creep
- Hope Creep
- Effort Creep
- Feature Creep

Project Classification

- To adopt a “one size fits all” approach to every project is just asking for trouble.
- Your approach to managing any project must adapt to the characteristics of the project.
- A classification rule can help you choose that approach

Classification by Project Characteristics

- Risk
- Business Value
- Duration
- Complexity
- Technology used
- Number of departments affected
- Cost

Example Project Classes and Definitions

CLASS	DURATION	RISK	COMPLEXITY	TECHNOLOGY	LIKELIHOOD OF PROBLEMS
Type A	> 18 months	High	High	Breakthrough	Certain
Type B	9-18 months	Medium	Medium	Current	Likely
Type C	3-9 months	Low	Low	Best of Breed	Unlikely
Type D	<3 months	Very Low	Very Low	Practical	Few

Table 1-1

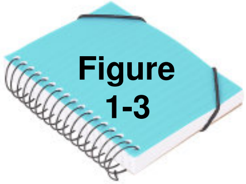
Classification by Project Type

- Installing software
- Recruiting and hiring
- Setting up a hardware system in a field office
- Soliciting, evaluating, and selecting vendors
- Updating a corporate procedure
- Developing application systems

Required and Optional Processes

Project Management Process	Project Classification IV	III	II	I
Define				
Conditions of Satisfaction	R	R	O	O
Project Overview Statement	R	R	R	R
Approval of Request	R	R	R	R
Plan				
Conduct Planning Session	R	R	O	O
Prepare Project Proposal	R	R	R	R
Approval of Proposal	R	R	R	R
Launch				
Kick-Off Meeting	R	R	O	O
Task Schedule	R	R	R	R
Resource Assignments	R	R	R	O
Statements of Work	R	O	O	O
Monitor/Control				
Status Reporting	R	R	R	R
Project Team Meetings	R	R	O	O
Approval of Deliverables	R	R	R	R
Close				
Post-implementation Audit	R	R	R	R
Project Notebook	R	R	O	O

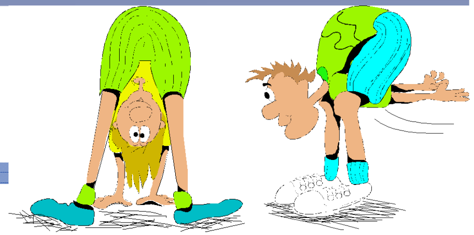
R = Required O = Optional



Classification by Project Type

- Software installation
- Recruiting and hiring
- Set-up hardware in a field office
- Vendor solicitation, evaluation, and selection
- Updating a corporate procedure
- Application systems development
- Etc.
- Etc.

Class Exercise #1



Read the Case Study and Form Teams

Pizza Delivered Quickly (PDQ) has fallen on hard times and needs your help to survive. Read the Case Study and be prepared to ask questions for clarification.

Once the case study has been clarified, teams will be chosen. Teams will work on the same case study but independently of each other. Team size should be between 4-6.

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch02: What Is Project Management?

Presented by
(facilitator name)

Ch02: What Is Project Management?

Summary of Chapter 2

- Working description of project management
- What are requirements – really?
- Introducing project management life cycles
- The project landscape
- Traditional Project Management (TPM)
- Agile Project Management (APM)
- Extreme Project Management (xPM)
- Emertxe Project Management (MPx)
- Choosing the best-fit PMLC Model

Working Description of Project Management

Project management is a set of tools, templates, and processes designed to answer the following six questions:

- What business situation is being addressed by this project?
- What do you need to do?
- What will you do?
- How will you do it?
- How will you know you did it?
- How well did you do?

Ch02: What Is Project Management?

Definition of Project Management

Project management is an organized common-sense approach that utilizes the appropriate client involvement in order to deliver client requirements that meet expected incremental business value.

Definition of Requirements

A requirement is a desired end-state whose successful integration into the solution delivers specific, measurable, and incremental business value to the organization.

The Value of this Definition of Requirements

- Reduces the number of requirements from dozens (even hundreds) to 6 or 8.
- Identifying the complete definition of most requirements happens only through iteration.
- Simplifies the search for a solution with acceptable business value.
- Choosing among alternative solution directions is simplified.
- Provides for better use of scarce resources (money, time, and people).
- It is a working definition.

Introducing Project Management Life Cycles

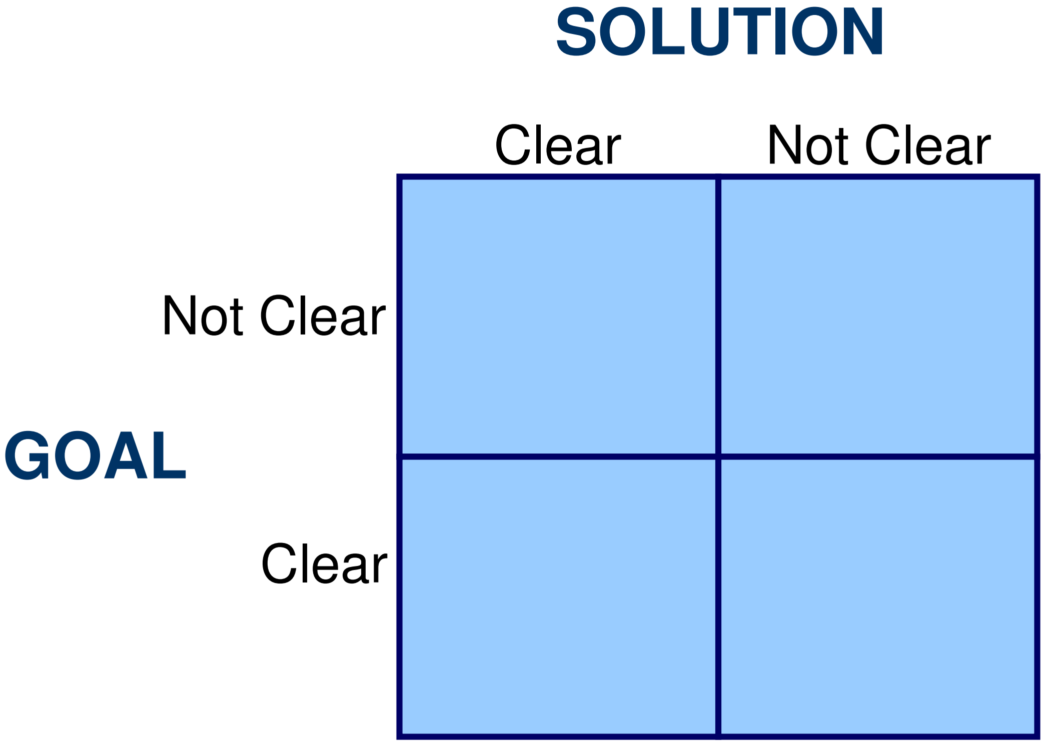


Figure 2-1

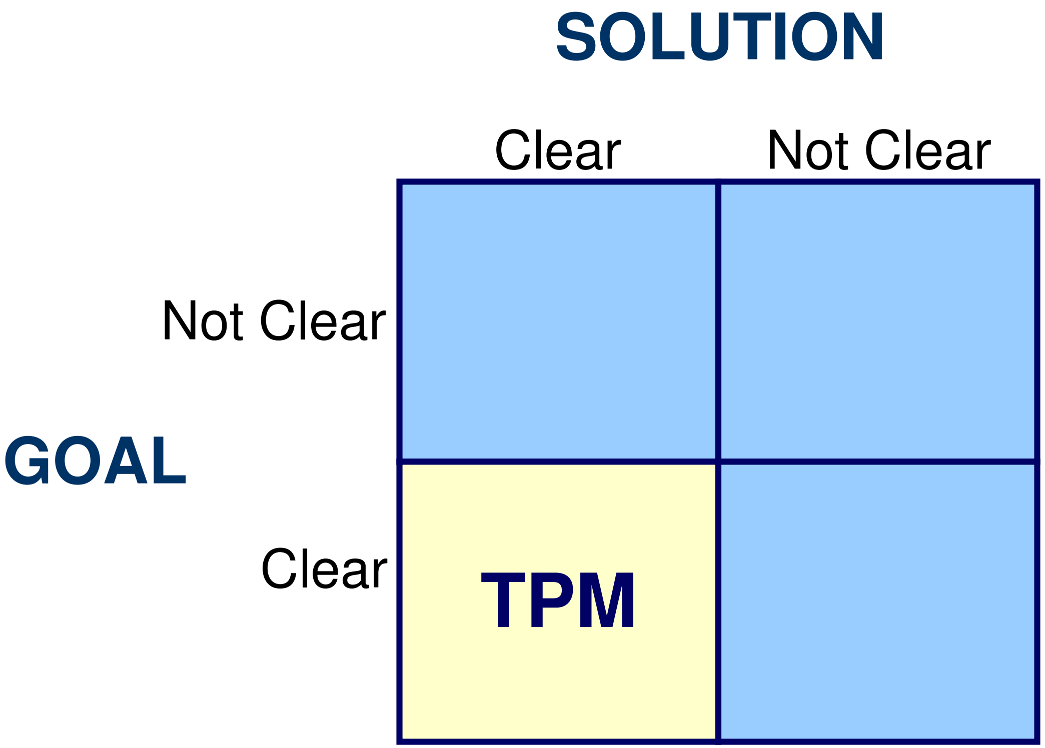
Definition of a Project Management Life Cycle

A project management life cycle is a sequence of processes that includes:

- Scoping
- Planning
- Launching
- Monitoring & Controlling
- Closing

NOTE: Every valid project management approach must include these processes.

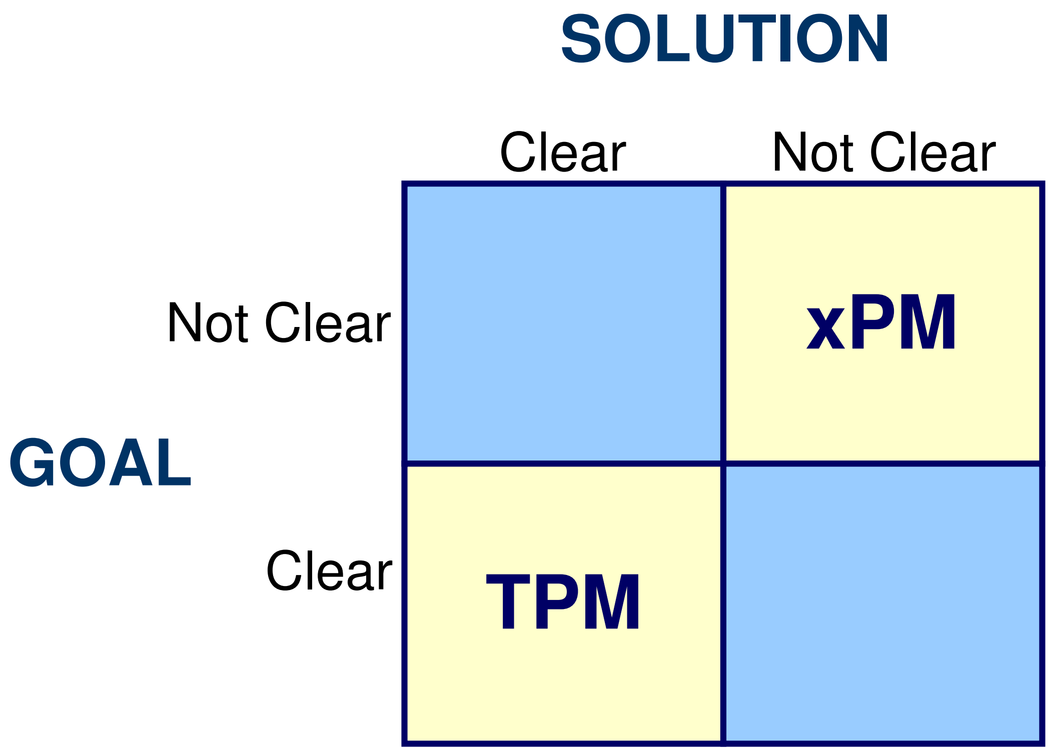
TPM – Traditional Project Management



GOAL \ SOLUTION	Clear	Not Clear
Not Clear		
Clear	**TPM**	

Figure 2-1

xPM – Extreme Project Management



GOAL \ SOLUTION	Clear	Not Clear
Not Clear		xPM
Clear	TPM	

Figure 2-1

APM – Agile Project Management

		SOLUTION	
		Clear	Not Clear
GOAL	Not Clear		**xPM**
	Clear	**TPM**	**APM**

Figure 2-1

Emertxe Project Management

GOAL \ SOLUTION	Clear	Not Clear
Not Clear	**MPx**	**xPM**
Clear	**TPM**	**APM**

Figure 2-1

Examples of Each Project Type

TPM	Install an intranet network in field office
APF	Put a man on the moon by the end of the decade and return him safely
xPM	Cure the common cold
MPx	Give an example

		SOLUTION	
		Clear	Not Clear
GOAL	Not Clear	MPx	xPM
	Clear	TPM	APM

Project Management Life Cycle Approaches

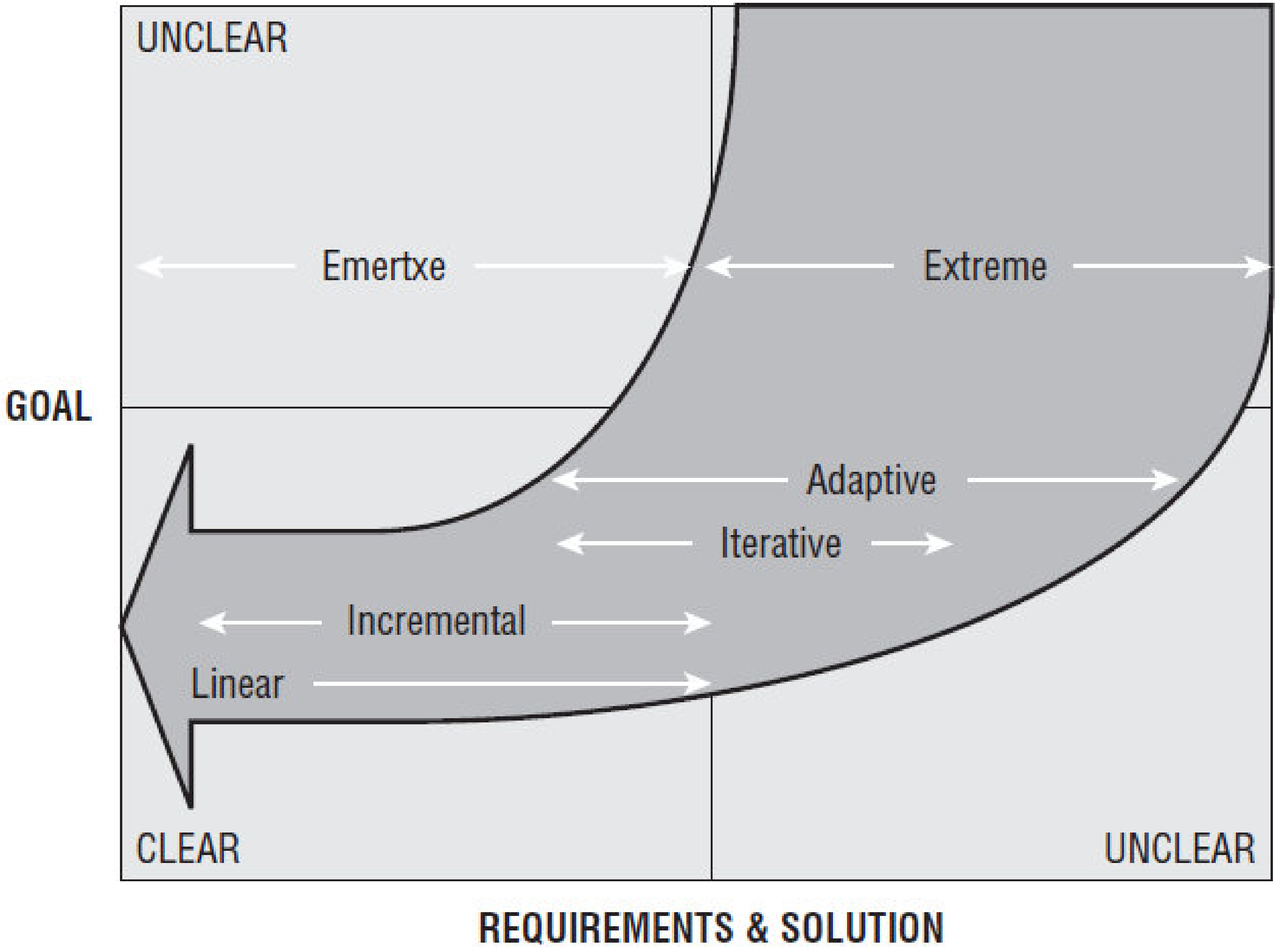


Figure 2-2

Linear Project Management Life Cycle Model

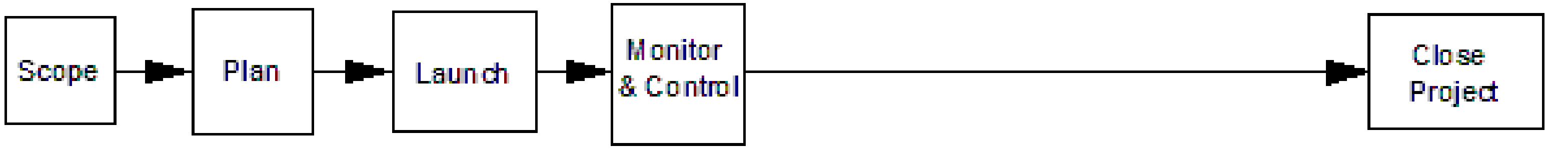


Figure 2-3

Incremental Project Management Life Cycle Model

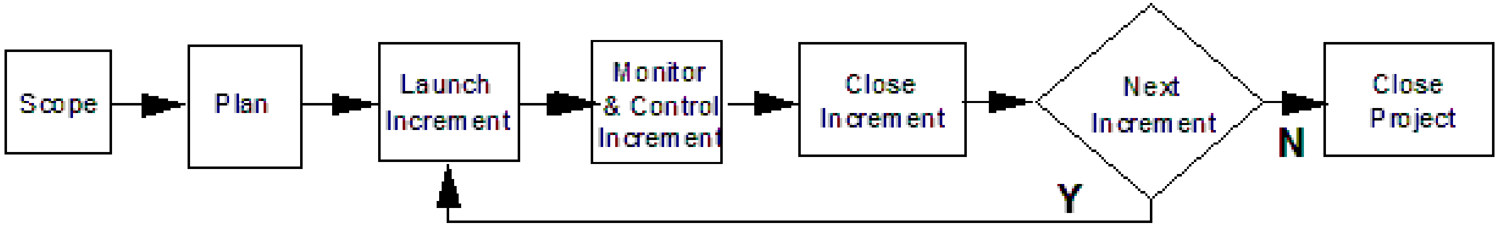


Figure 2-4

Iterative Project Management Life Cycle Model

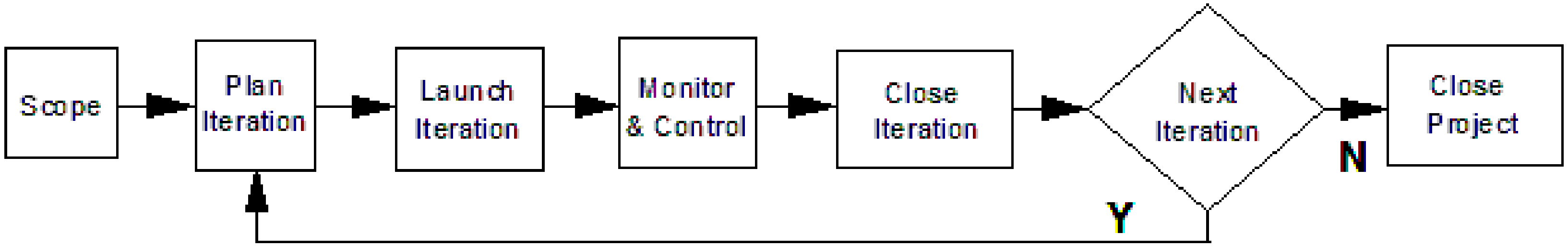
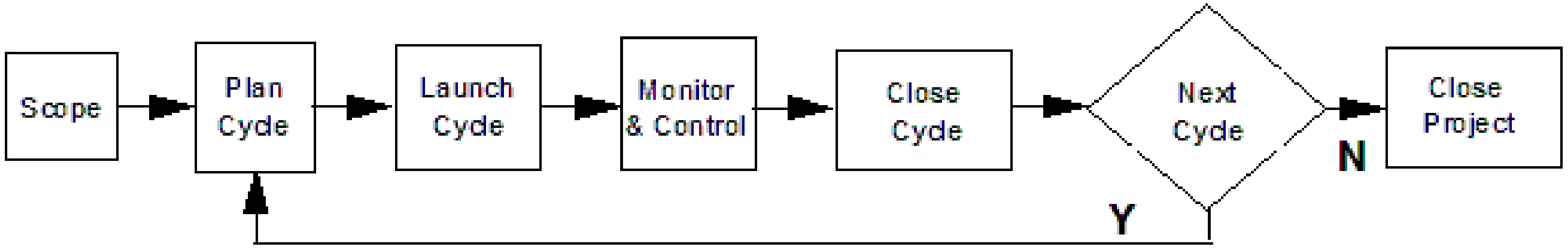


Figure 2-5

Adaptive Project Management Life Cycle Model



Scope

Plan Cycle

Launch Cycle

Monitor & Control

Close Cycle

Next Cycle

N

Y

Close Project

Figure 2-6

Extreme Project Management Life Cycle Model

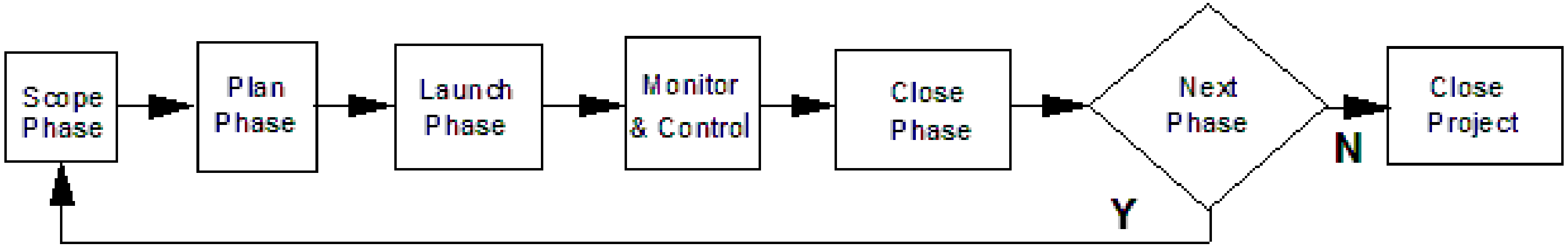
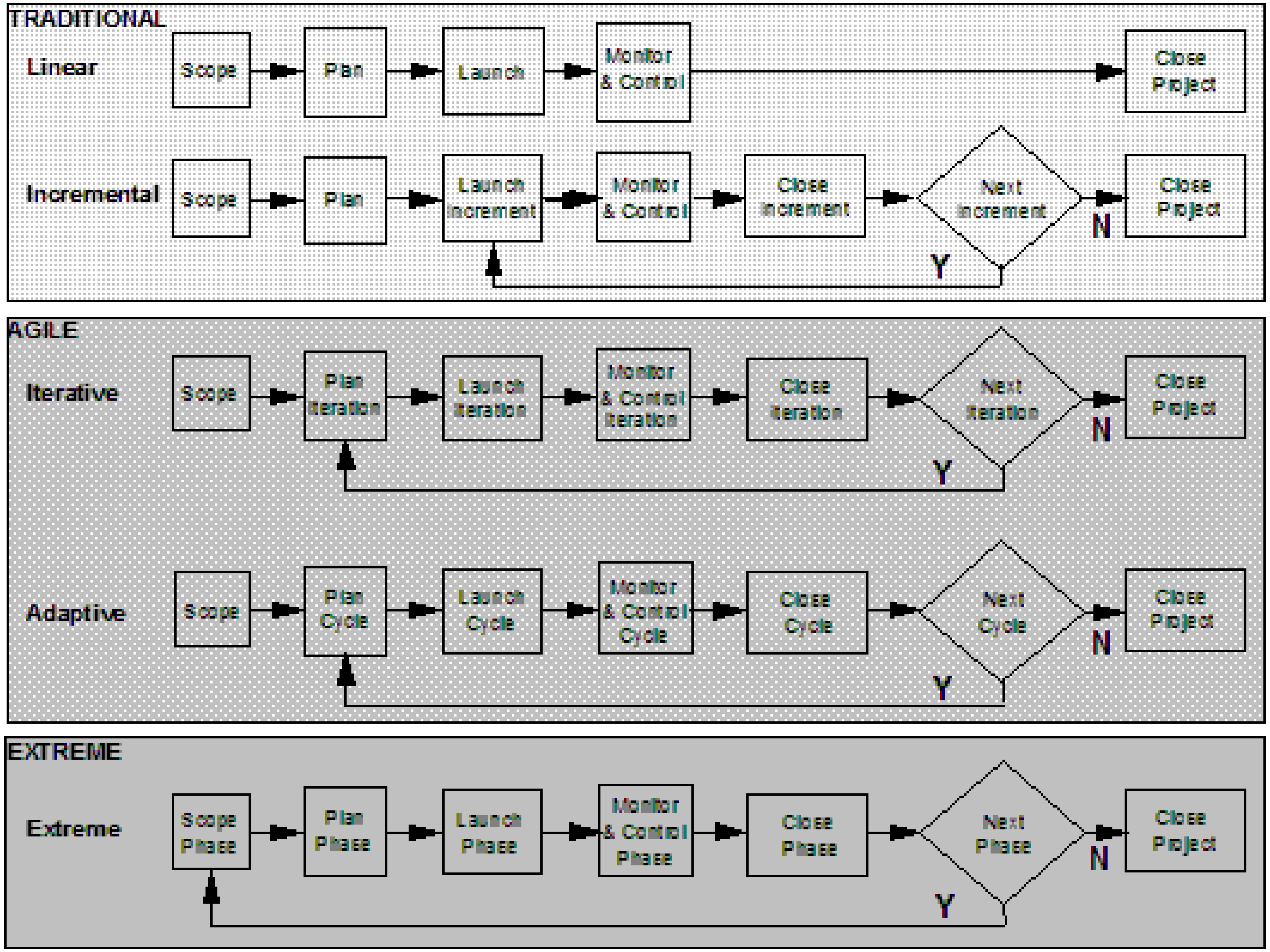


Figure 2-7

The 5 PMLC Models



TRADITIONAL

Linear: Scope → Plan → Launch → Monitor & Control → Close Project

Incremental: Scope → Plan → Launch Increment → Monitor & Control → Close Increment → Next Increment (Y → Launch Increment; N → Close Project)

AGILE

Iterative: Scope → Plan Iteration → Launch Iteration → Monitor & Control Iteration → Close Iteration → Next Iteration (Y → Plan Iteration; N → Close Project)

Adaptive: Scope → Plan Cycle → Launch Cycle → Monitor & Control Cycle → Close Cycle → Next Cycle (Y → Plan Cycle; N → Close Project)

EXTREME

Extreme: Scope Phase → Plan Phase → Launch Phase → Monitor & Control Phase → Close Phase → Next Phase (Y → Scope Phase; N → Close Project)

Figure 2-8

Choosing the Best-Fit PMLC Model

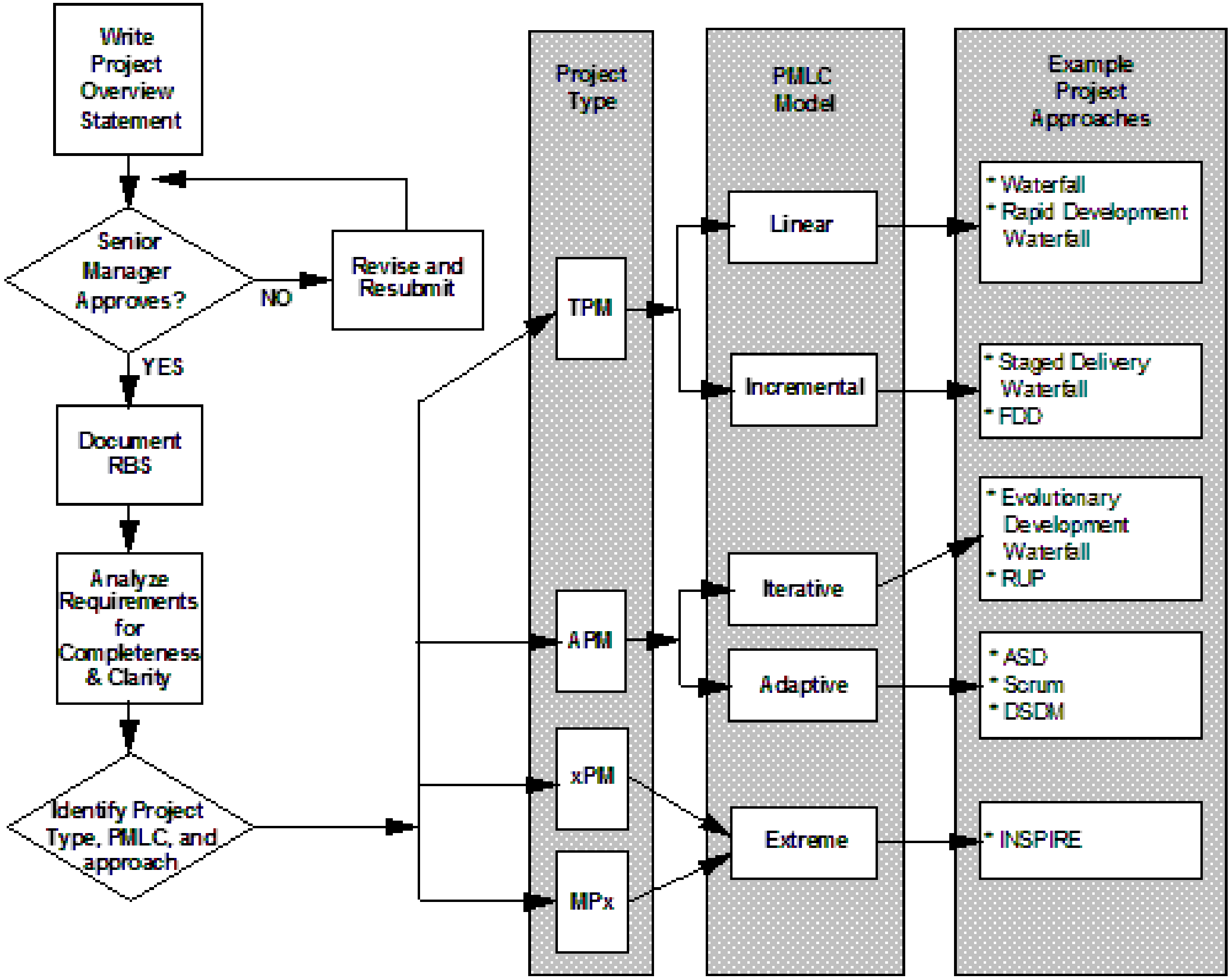

Write Project Overview Statement
Senior Manager Approves?
NO
Revise and Resubmit
YES
Document RBS
Analyze Requirements for Completeness & Clarity
Identify Project Type, PMLC, and approach
Project Type
TPM
APM
xPM
MPx
PMLC Model
Linear
Incremental
Iterative
Adaptive
Extreme
Example Project Approaches
* Waterfall
* Rapid Development Waterfall
* Staged Delivery Waterfall
* FDD
* Evolutionary Development Waterfall
* RUP
* ASD
* Scrum
* DSDM
* INSPIRE

Figure 2-9

Recap of the PMLC Models

Similarities

- All 5 Process Groups are used in each PMLC Model
- Each PMLC Model begins with a Scope Process Group
- Each PMLC Model ends with a Close Process Group

Differences

- The models form a natural ordering (Linear, Incremental, Iterative, Adaptive, Extreme) by degree of solution uncertainty
- The processes that form repetitive groups recognize the effect of increasing uncertainty as you traverse the natural ordering
- Complete project planning is replaced by just-in-time project planning as the degree of uncertainty increases
- Risk management becomes more significant as degree of solution uncertainty increases
- The need for meaningful client involvement increases as degree of solution uncertainty increases

When to Use (1 of 2)

Linear

- Clearly defined solution and requirements
- Not many scope change requests
- Routine and repetitive projects
- Uses established templates

Incremental

- Same as linear but delivers business value early and often
- Some likelihood of scope change requests

Iterative

- Unstable or incomplete requirements and functionality
- Learn by doing and by discovery

When to Use (2 of 2)

Adaptive

- Goal known but solution not known
- Solution highly influenced by expected changes
- New product development and process improvement projects

Extreme

- Goal and solution not known
- Through iteration converge on goal and solution
- Typically for R&D projects

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Ch03: Understanding the Project Management Process Groups

Presented by
(facilitator name)

Ch03: Understanding the PM Process Groups

Summary of Chapter 3

- Defining the five process groups
- Defining the nine knowledge areas
- Mapping knowledge areas into process groups

The Five Project Management Process Groups

The Scoping Process Group	Develop and gain approval of a general statement of the goal and business value of the project.
The Planning Process Group	Identify work to be done and estimate time, cost, and resource requirements, and gain approval.
The Launching Process Group	Recruit the team and establish team operating rules.
The Monitoring & Controlling Process Group	Respond to change requests and resolve problem situations to maintain project progress.
The Closing Process Group	Assure attainment of client requirements and install deliverables.

The Project Management Process Groups

The Scoping Process Group

Develop and gain approval of a general statement of the goal and business value of the project.

- Eliciting the true needs of the client
- Documenting the client’s needs
- Negotiating with the client how these needs will be met
- Writing a one-page description of the project
- Gaining senior management approval to plan the project

The Project Management Process Groups

The Planning Process Group

Identify work to be done and estimate time, cost, and resource requirements, and gain approval to do the project.

- Defining all of the work of the project
- Estimating how long it will take to complete this work
- Estimating the resources required to complete the work
- Estimating the total cost of the work
- Sequencing the work
- Building the initial project schedule
- Analyzing & adjusting the project schedule
- Writing a risk management plan
- Documenting the project plan
- Gaining senior management approval to launch the project

The Project Management Process Groups

The Launching Process Group

Recruit the team and establish team operating rules.

- Recruiting the project team
- Writing the Project Description Document
- Establishing team operating rules
- Establishing the scope change management process
- Managing team communications
- Finalizing the project schedule
- Writing work packages

The Project Management Process Groups

The Monitoring & Controlling Process Group

Respond to change requests and resolve problem situations to maintain project progress.

- Monitoring project performance
- Establishing the project performance and reporting system
- Monitoring risk
- Reporting project status
- Processing scope change requests
- Discovering and solving problems

The Project Management Process Groups

The Closing Process Group

Assure attainment of client requirements and install deliverables.

- ➢ Gaining client approval of having met project requirements
- ➢ Planning and installing deliverables
- ➢ Writing the final project report
- ➢ Conducting the post-implementation audit

Ch03: Understanding the PM Process Groups

The Project Management Life Cycle (PMLC)

- Contrary to public opinion, process groups are not a PMLC.
- Process groups will be mapped to form complex PMLCs.

Ch03: Understanding the PM Process Groups

The Nine Project Management Knowledge Areas

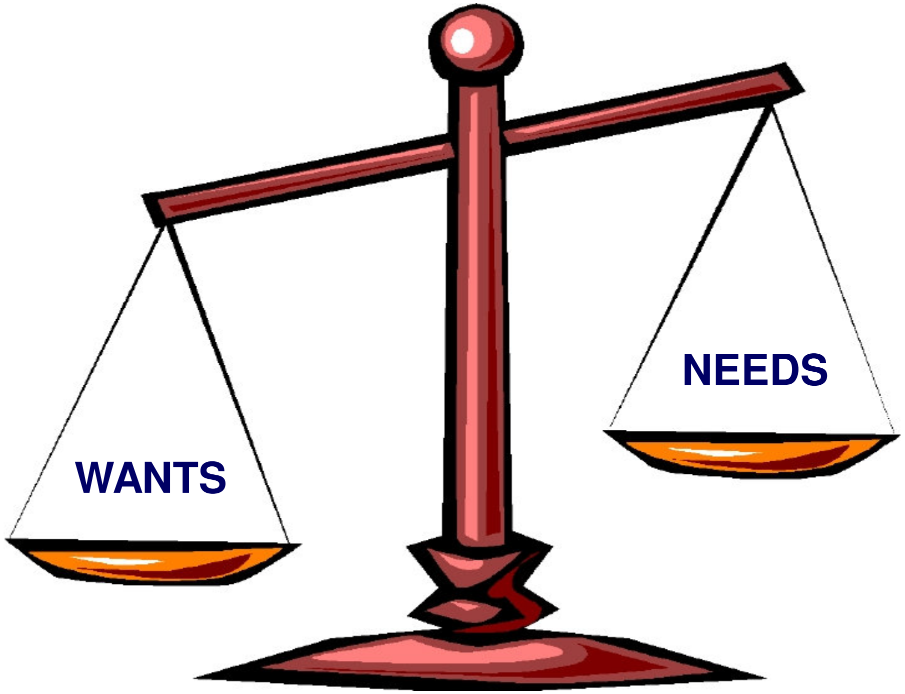
- Integration Management
- Scope Management
- Time Management
- Cost Management
- Quality Management
- Human Resources Management
- Communications Management
- Risk Management
- Procurement Management

Ch03: Understanding the PM Process Groups

Integration Management

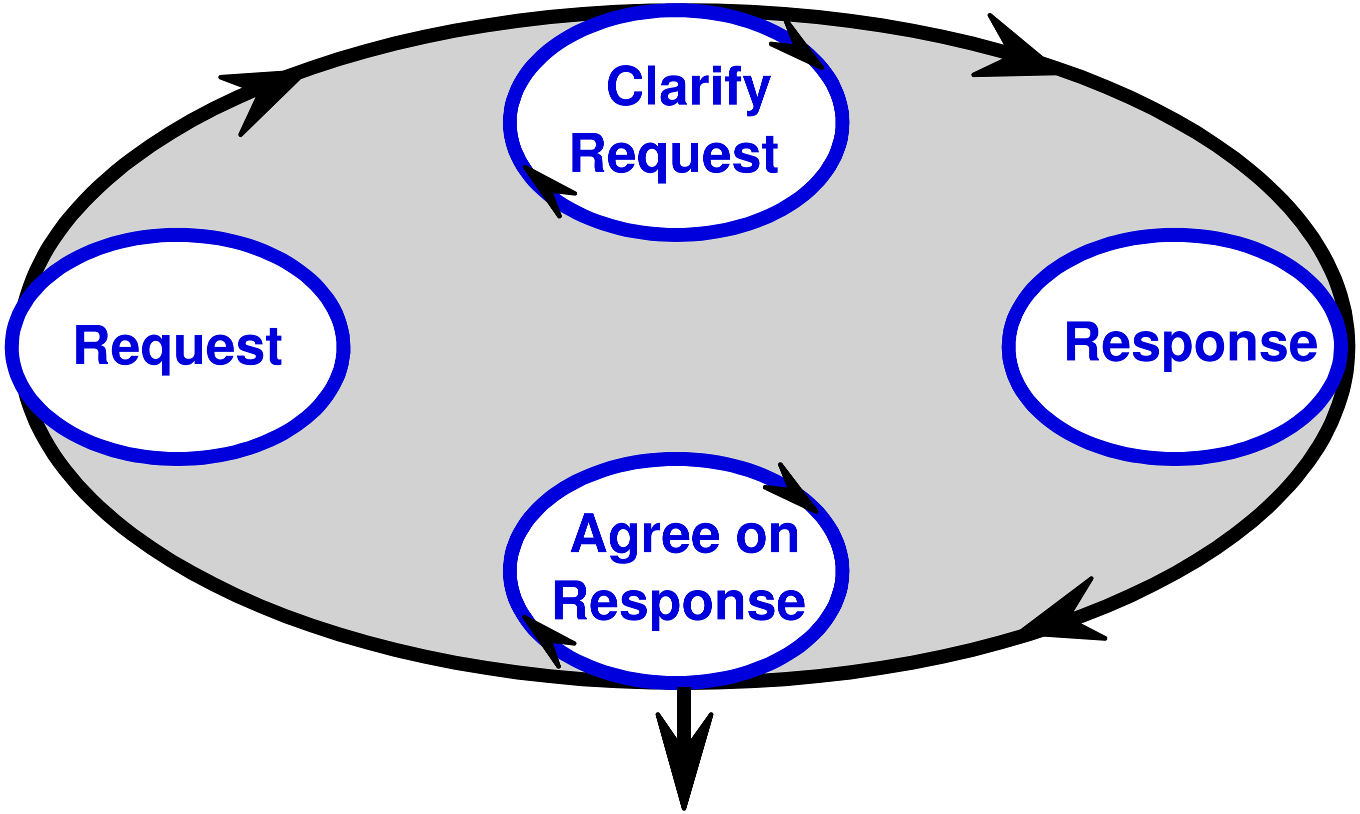
- Develop Project Overview Statement
- Develop Scope Statement
- Develop Project Plan
- Launch Project
- Monitor and Control Project Work
- Integrated Change Control
- Close Project

Scope Management – Client Wants vs. Client Needs



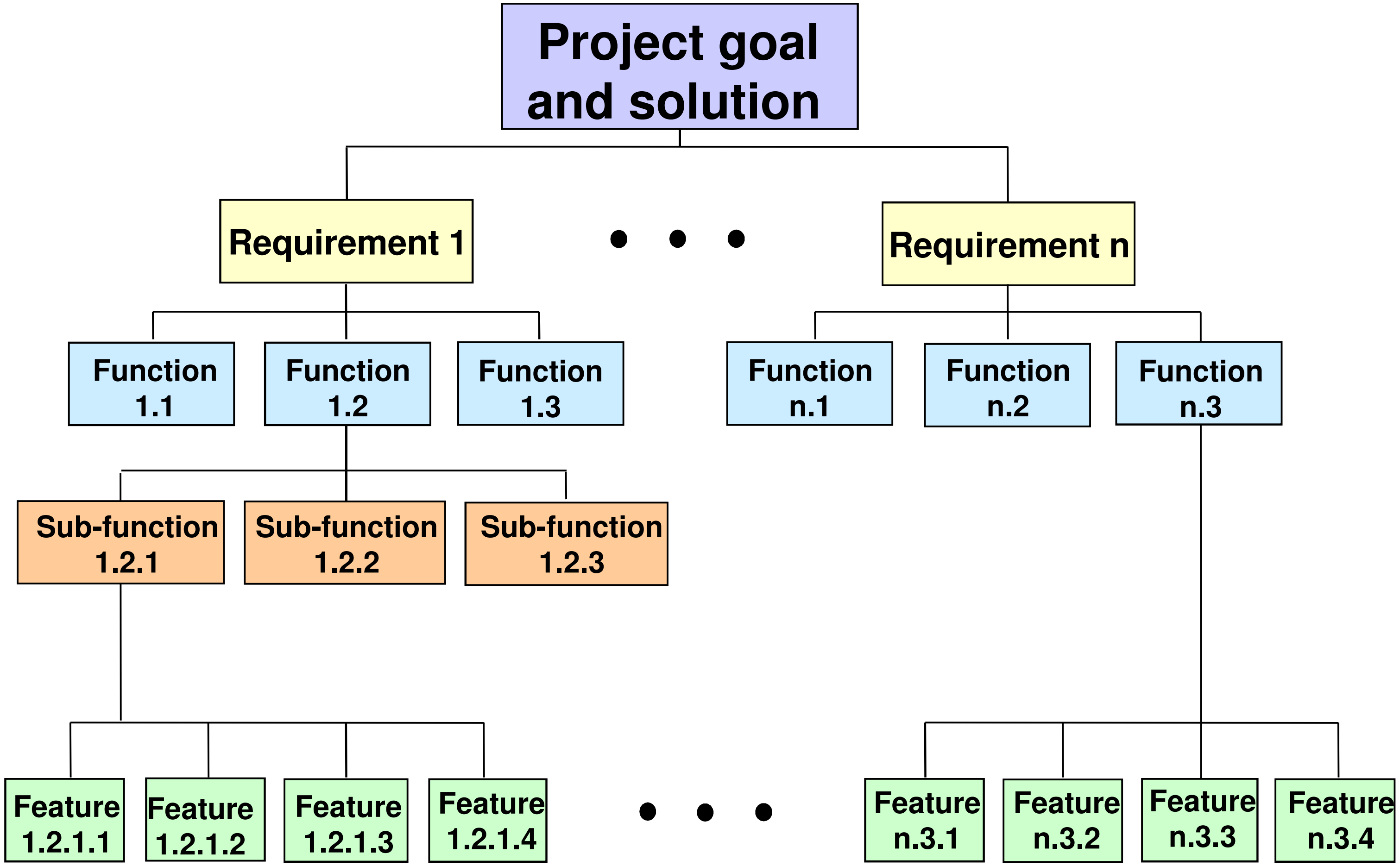
What your client wants may not be what your client needs.

Scope Management – Conditions of Satisfaction



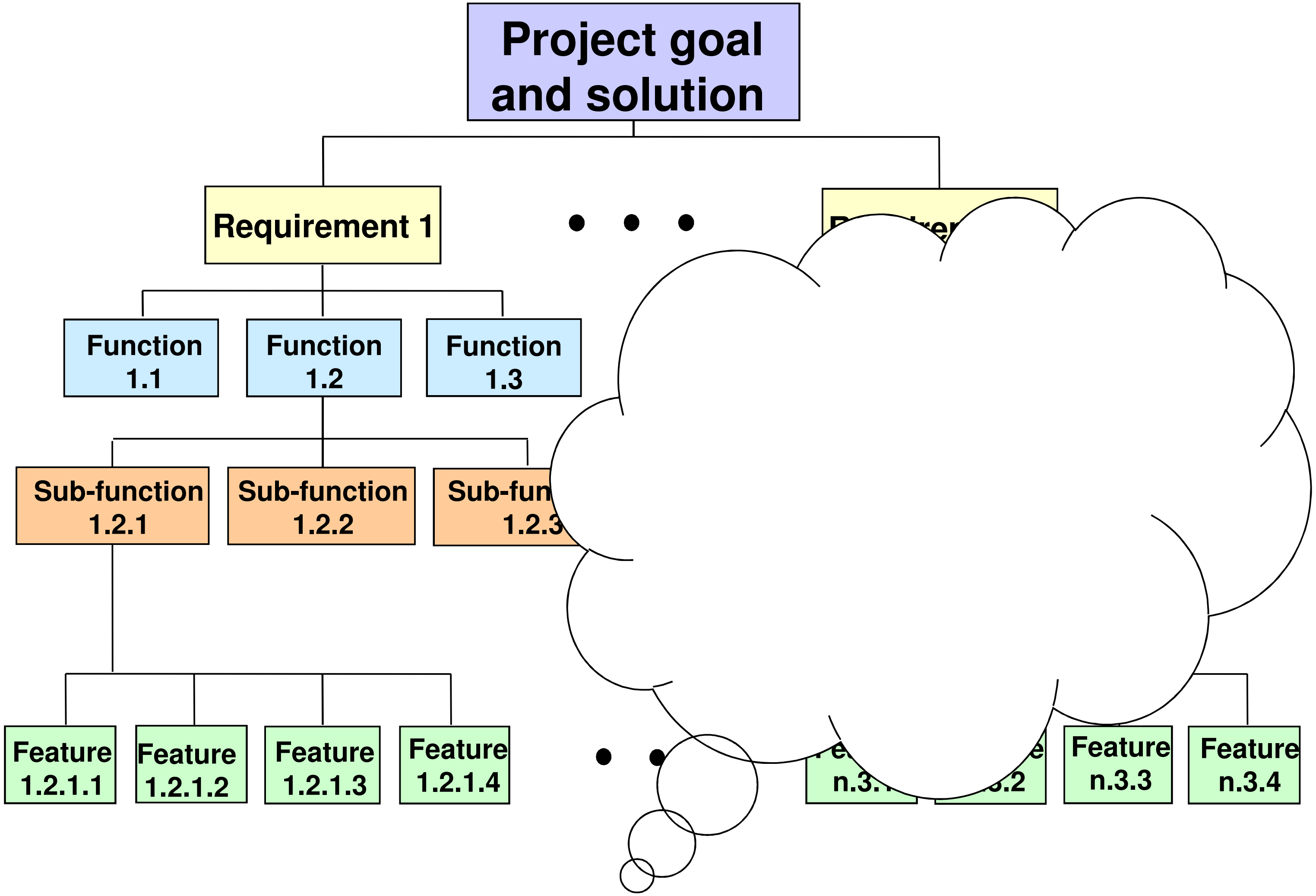
Negotiate agreement and
write Project Overview Statement

Scope Management – RBS

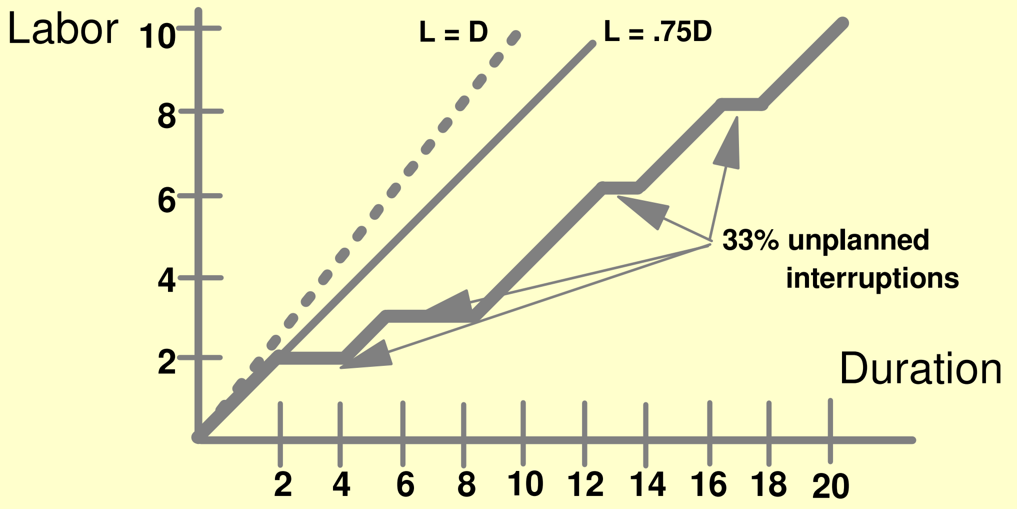


Ch03: Understanding the PM Process Groups

Scope Management – RBS



Time Management – Duration and Labor



MODEL ASSUMPTIONS

* Individuals work at 75 percent efficiency rate.

* Unplanned interruptions account for 33 percent of clock time.

Time Management – Estimate Task Duration

- Similarity to other activities
- Historical data
- Expert advice
- Delphi technique
- Three-point technique
- Wide-band Delphi technique

Cost Management

- Labor Rates
  - Single labor rate
  - Labor rate by position class
- Capital Equipment
- Contracted Services

Quality Management – Definition of Quality

- Fit for use
- Meets all client requirements
- Delivered on time within budget and according to client specifications

Is there anything about these definitions that surprises you?

Quality Management – Types of Quality

- Process Quality
  - The quality of the project management process that produced the product
- Product Quality
  - The quality of the deliverables from the project

Quality Management – Consists of:

- Quality planning
- Quality assurance
- Quality control

Project Quality Management

Quality Planning

Determine relevant quality standards for the project and what you can do to satisfy them. The inputs to this process are:

- **Environmental factors** such as agency regulations, rules, standards, and guidelines
- **Organizational assets** such as quality policies, procedures and guidelines, historical data, and lessons learned
- **Project Overview Statement**
- **Project Management Plan**

A Quality Plan documents:

- How the quality policies will be met
- The metrics that will be used to measure quality
- A process improvement program

Ch03: Understanding the PM Process Groups

Quality Assurance

- Apply quality activities so that the project employs the processes needed to assure that quality requirements are met. These can include:
  - Quality Audits
  - Process Analysis
  - Project Quality Management Tools

Quality Control

- Monitor project performance to determine compliance to quality standards and how to eliminate non-compliance. This will be accomplished by using project management tools, templates, and processes.

Ch03: Understanding the PM Process Groups

Human Resources Management

- Project Team
  - Developer co-manager
  - Client co-manager
  - Core Team
  - Task Leaders
  - Team Members
- Skills and Competencies

Human Resources Management

- Projects as Motivators
    - Achievement
    - Recognition
    - Advancement and Growth
    - Responsibility
    - Work Itself
- Hygiene Factors
    - Company Policy
    - Administrative Practices
    - Working Conditions
    - Technical Supervision
    - Interpersonal Relations
    - Job Security
    - Salary

Human Resources Management – Project Manager

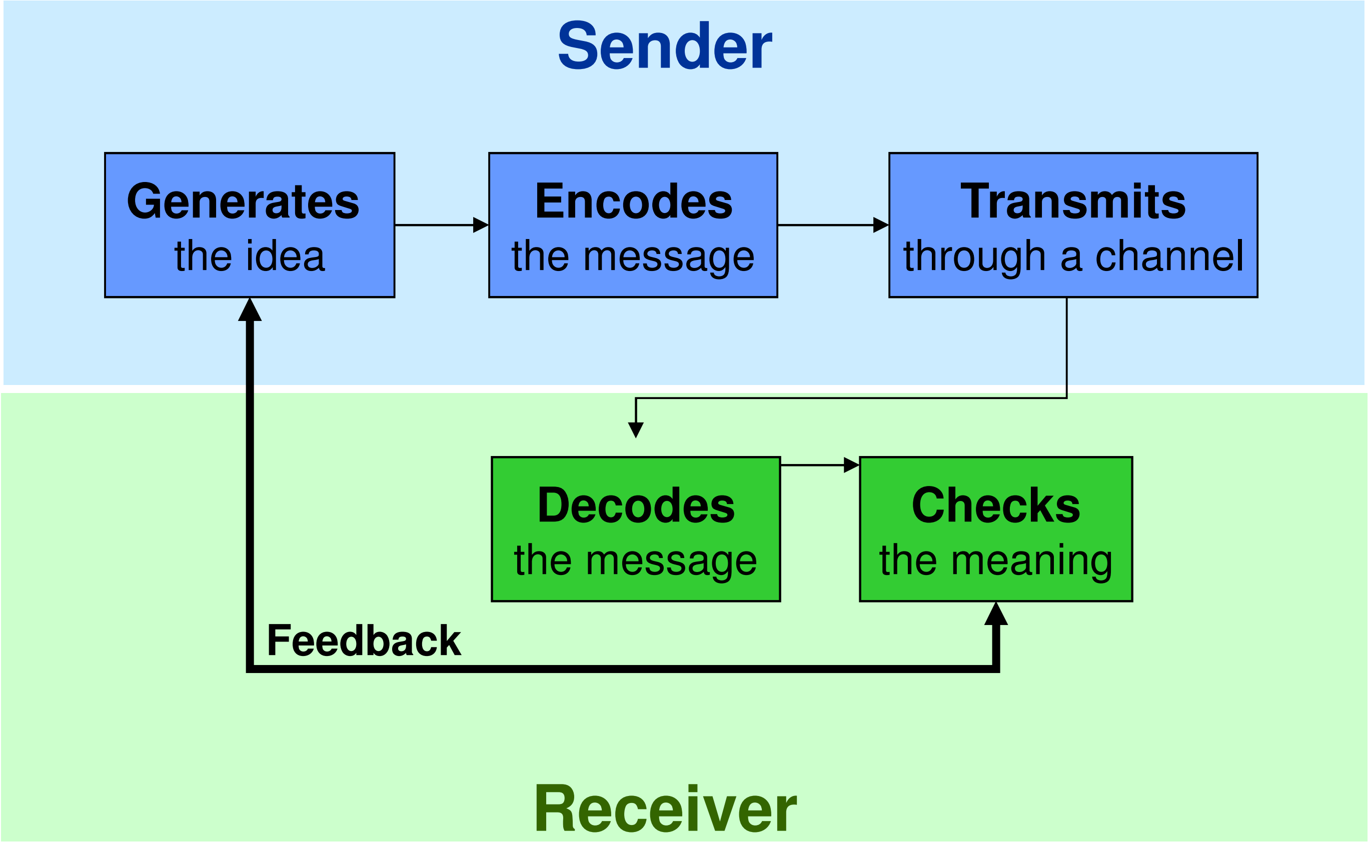
- Challenge
- Recognition
- Job Design
- Skill Variety
- Task Identity
- Task Significance
- Autonomy
- Feedback

Communications Management – Definition

Communication is the process of passing information and understanding from one person to another.

- transmitted properly
- message sent is message received
- understood by the receiver
- accepted by the receiver

Communications Management – The Process



Sender

Generates the idea

Encodes the message

Transmits through a channel

Decodes the message

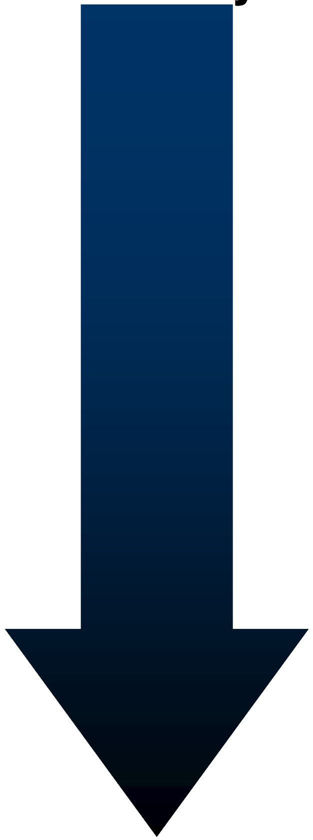
Checks the meaning

Feedback

Receiver

Communications Management – Types

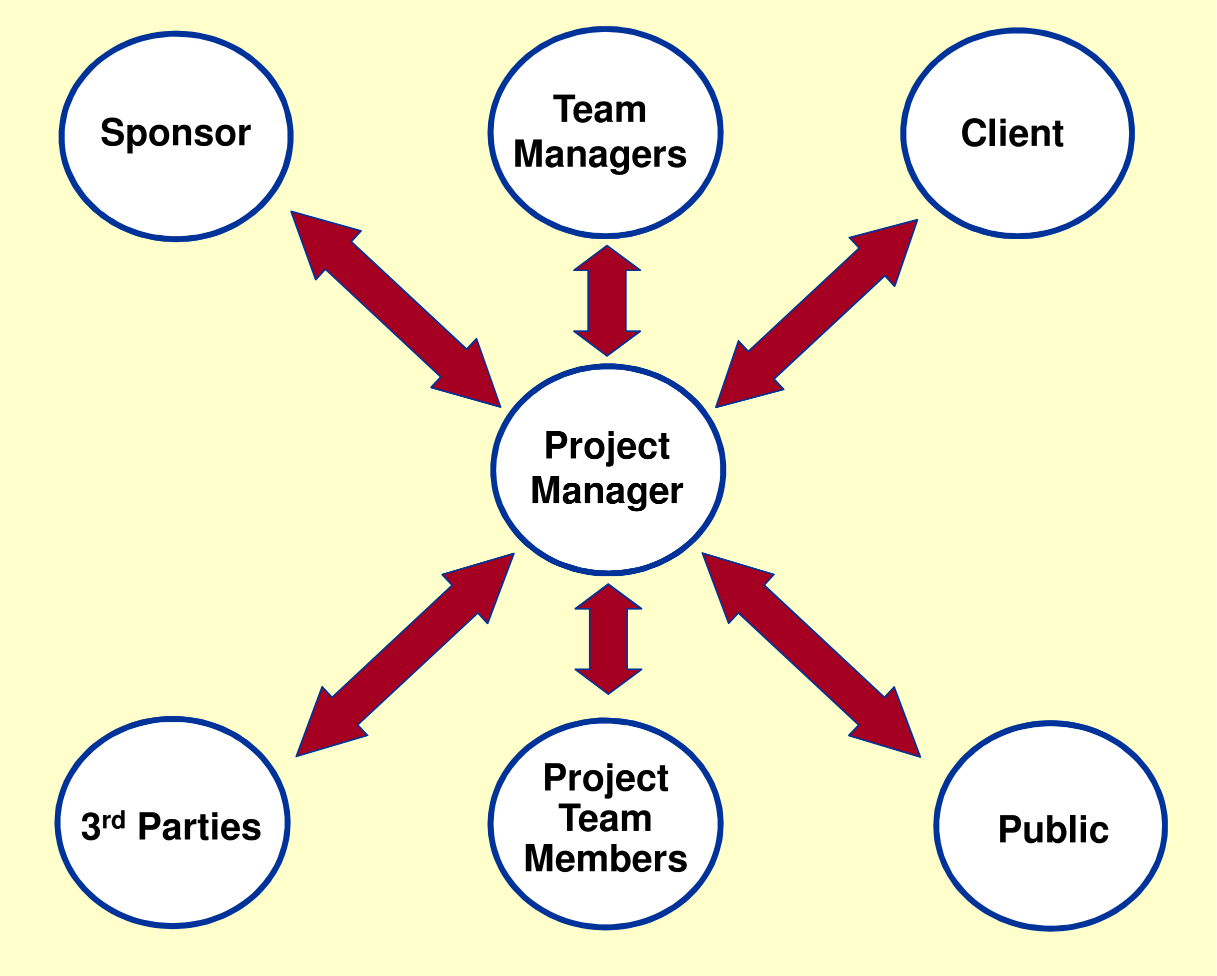
- One-to-one
  - Conversations (in person and on the phone)
  - Meetings
- Electronic
  - E-mail messages
  - Websites
  - Databases
- Written
  - Memos
  - Letters
  - Documents
  - Reports



Two-way

One-way

Communications Management – Interfaces



Sponsor

Team Managers

Client

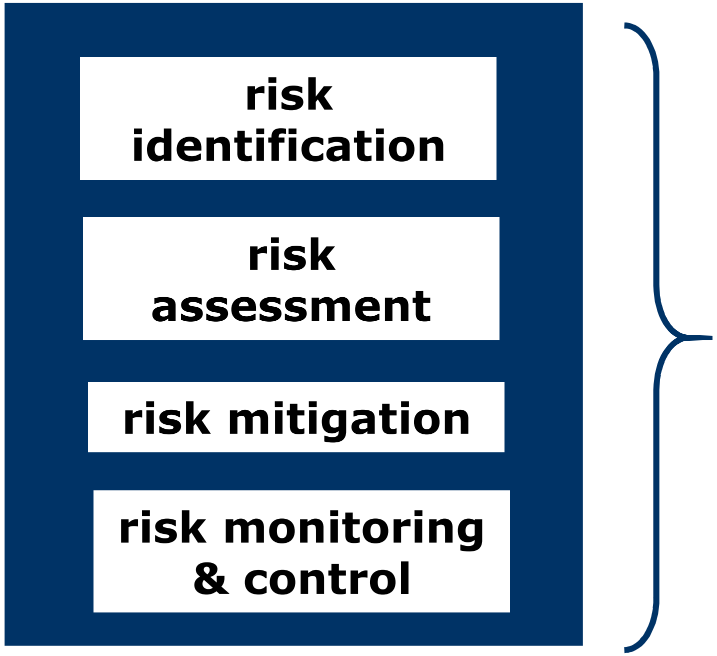
Project Manager

3rd Parties

Project Team Members

Public

Risk Management – The Life Cycle



risk identification

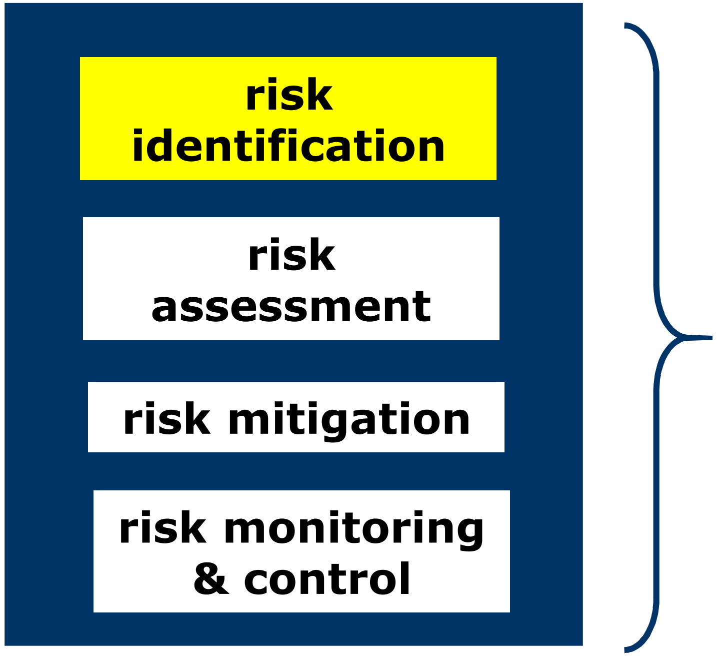
risk assessment

risk mitigation

risk monitoring & control

- What are the risks?
- What is the probability of loss that results from them?
- How much are the losses likely to cost?
- What might the losses be if the worst happens?
- What are the alternatives?
- How can the losses be reduced or eliminated?
- Will the alternatives produce other risks?

Risk Management – Risk Identification



- Technical risks
- Project management risks
- Organizational risks
- External risks

Simplified Risk Matrix Tool

RISK CATEGORIES AND RISKS	SCOPE TRIANGLE ELEMENTS				
	Scope	Time	Cost	Quality	Resources
Technical					
Project Management					
Organizational					
External					

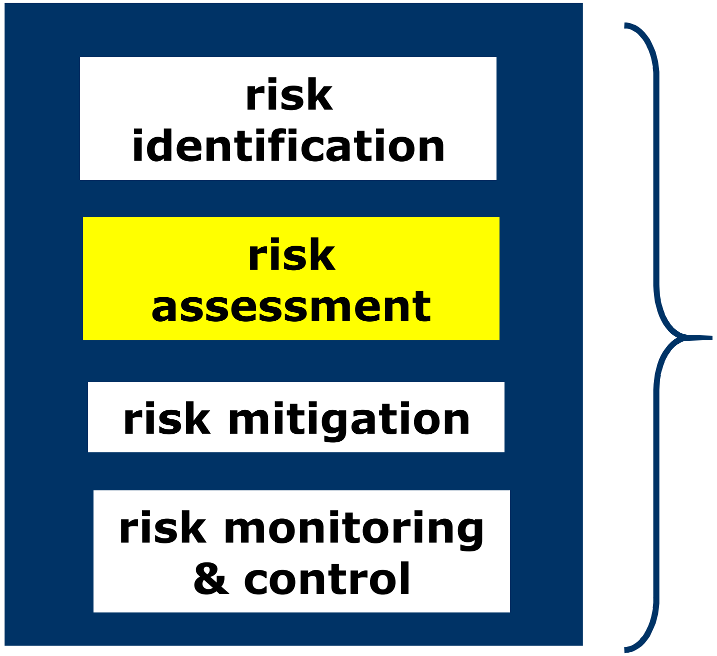
Figure 04-23

Risk Management – Risk Identification &assessment

Risk Category	Scope Triangle	Event #	Event	Y/N	Prob.	Impact	Priority	Mitigate Y/M/N
Tech	Scope	TS01	Available HW/SW technology limits scope					
		TS02	New technology does not integrate with old					
Tech	Time	TT01	Integrating technologies impacts schedule					
Tech	Cost	TC01	Unexpected need to acquire hardware					
Tech	Cost	TC02	Unexpected need to acquire software					
Tech	Quality	TQ01	Technology limits solution performance					
Tech	Res	TR01	New/unfamiliar technology					
Tech	Res	TR02	Inadequate software sizing					
Tech	Res	TR03	Inadequate hardware sizing					
Proj Mgt	Scope	PS01	Senior scope change request too significant					
Proj Mgt	Time	PT01	Schedule too aggressive					
Proj Mgt	Time	PT02	Interproject dependencies compromise schedule					
Proj Mgt	Time	PT03	Task duration estimates too optimistic					
Proj Mgt	Time	PT04	Difficulty scheduling meetings					
Proj Mgt	Quality	PQ01	Inaccurate assumption					

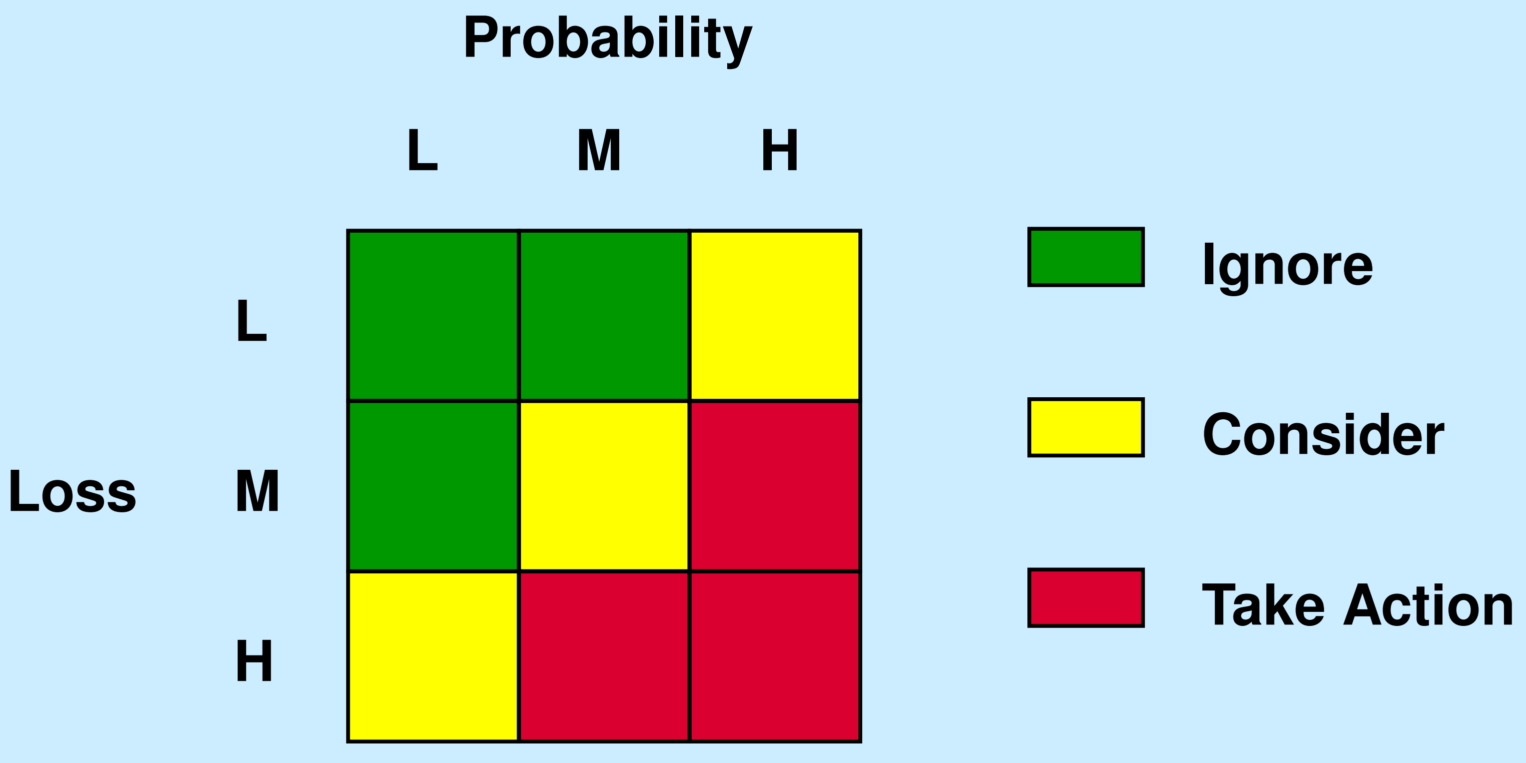
Figure 03-02

Risk Management – Risk Assessment



- What is the probability of loss that results from them?
- How much are the losses likely to cost?
- What might the losses be if the worst happens?

Qualitative Risk Assessment - Risk Matrix



Probability

		L	M	H
Loss	L	🟩	🟩	🟨
	M	🟩	🟨	🟥
	H	🟨	🟥	🟥

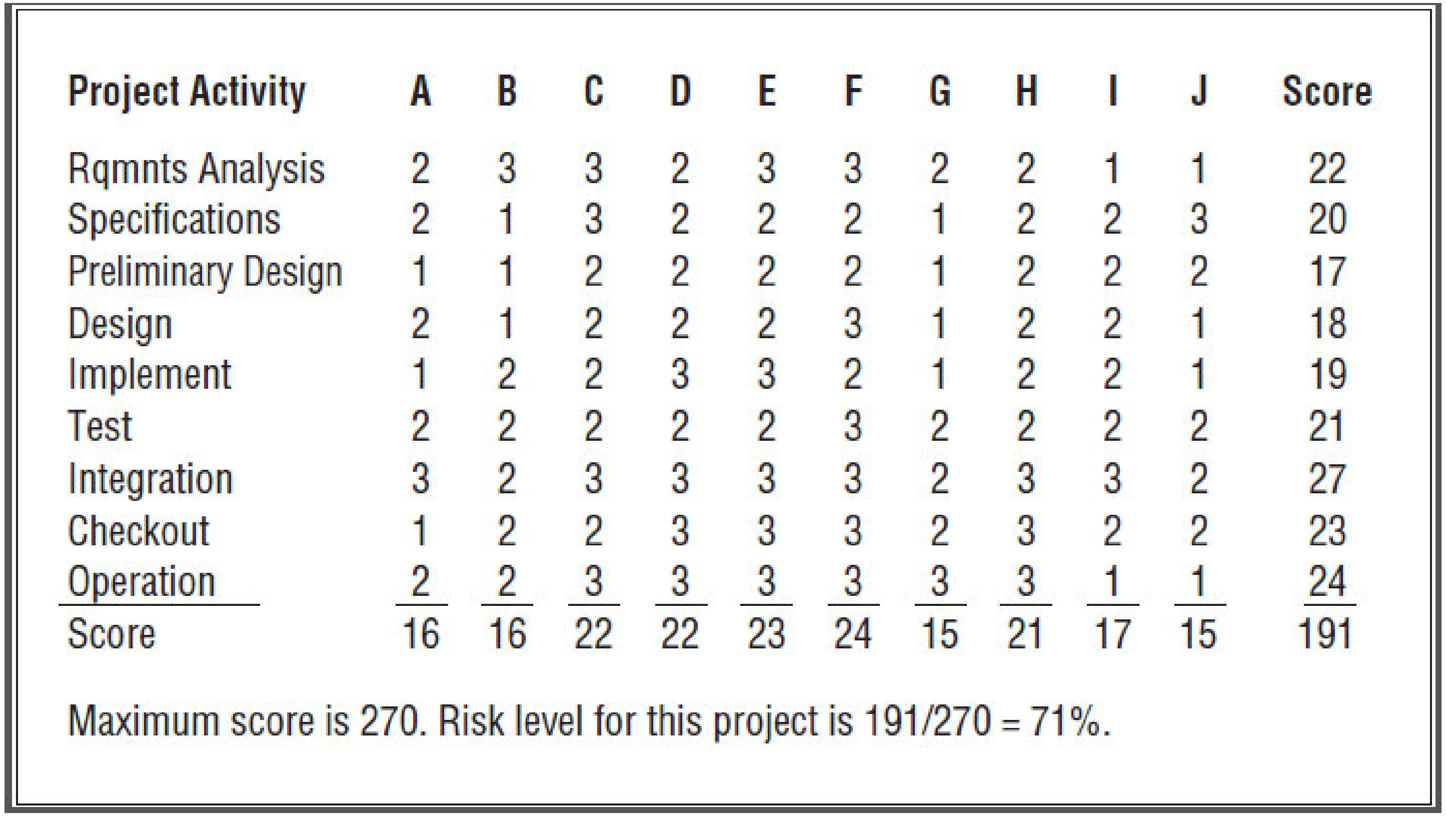
🟩 Ignore

🟨 Consider

🟥 Take Action

Figure 03-03

Quantitative Risk Assessment Worksheet



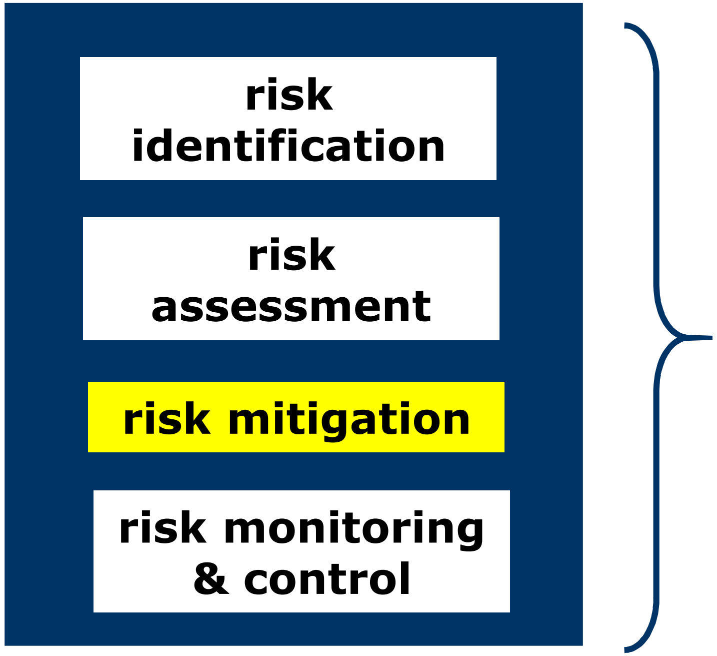
Project Activity	A	B	C	D	E	F	G	H	I	J	Score
Rqmnts Analysis	2	3	3	2	3	3	2	2	1	1	22
Specifications	2	1	3	2	2	2	1	2	2	3	20
Preliminary Design	1	1	2	2	2	2	1	2	2	2	17
Design	2	1	2	2	2	3	1	2	2	1	18
Implement	1	2	2	3	3	2	1	2	2	1	19
Test	2	2	2	2	2	3	2	2	2	2	21
Integration	3	2	3	3	3	3	2	3	3	2	27
Checkout	1	2	2	3	3	3	2	3	2	2	23
Operation	2	2	3	3	3	3	3	3	1	1	24
Score	16	16	22	22	23	24	15	21	17	15	191

Maximum score is 270. Risk level for this project is 191/270 = 71%.

Some organizations use a 1-5, or 1-10 metric

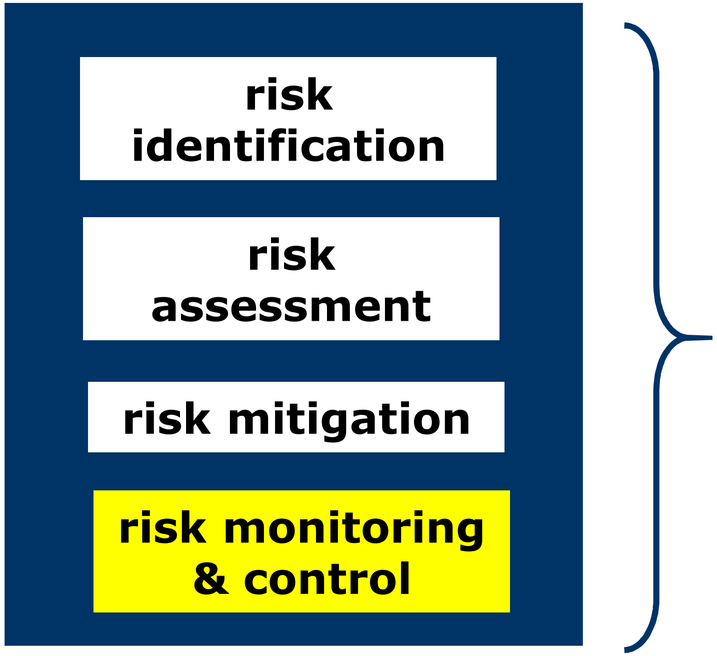
Figure 03-04

Risk Management – Risk Mitigation



- What are the alternatives?
- How can the losses be reduced or eliminated?
  - Accept
  - Avoid
  - Contingency planning
  - Mitigate
  - Transfer
- Will the alternatives produce other risks?

Risk Management – Risk Monitoring & Control



risk identification

risk assessment

risk mitigation

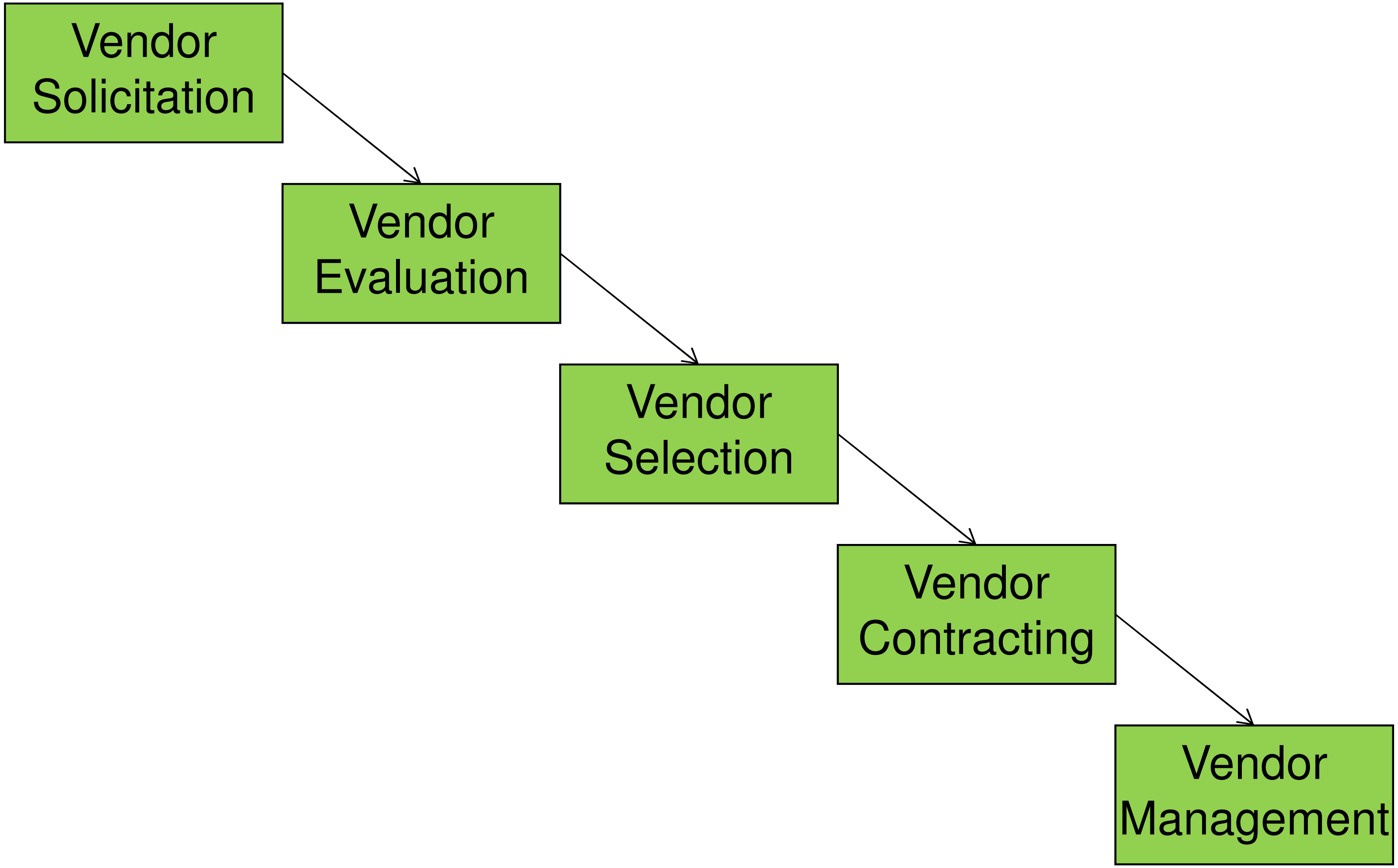
risk monitoring & control

- Risk Log

Risk Log Entry

ID #	Risk Description	P	I	Risk Owner	Action to be Taken	Outcome

Procurement Management – The Life Cycle



Vendor Solicitation

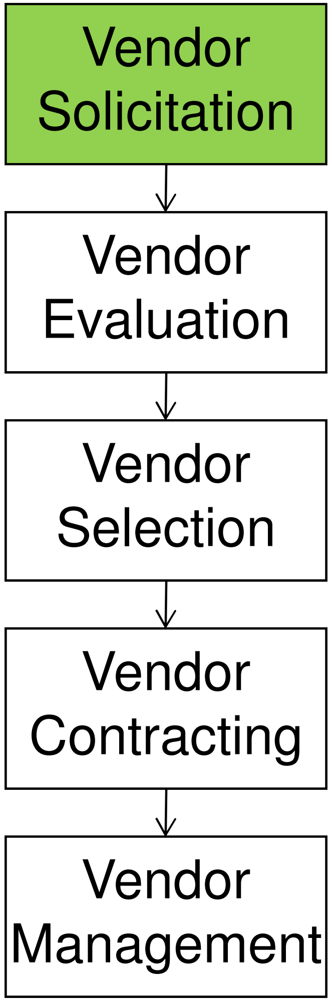
Vendor Evaluation

Vendor Selection

Vendor Contracting

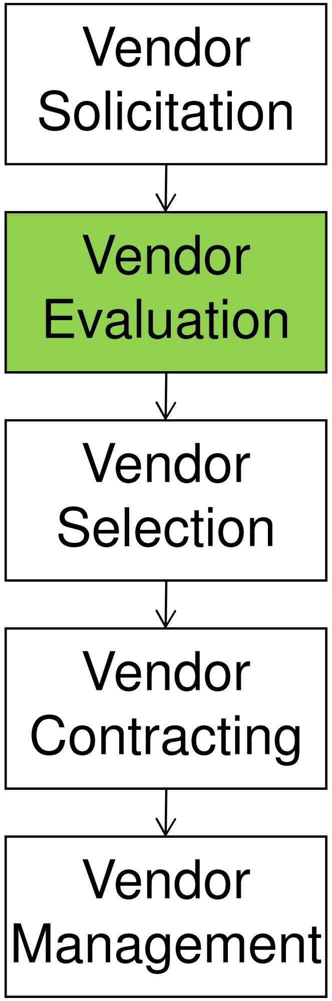
Vendor Management

Procurement Management Life Cycle



- Develop RBS
- Decide to use a vendor
- Identify potential vendors
- Select procurement management team (PMT)
- Determine vendor relationship
- Determine the acquisition strategy
- Establish vendor evaluation criteria
- Develop contract management
- Prepare & distribute Request for Proposal (RFP)
- Respond to bidder’s questions

Procurement Management Life Cycle



Vendor Solicitation

Vendor Evaluation

Vendor Selection

Vendor Contracting

Vendor Management

- Evaluate vendors
- Evaluate responses to RFP
- Reduce list of companies
- Conduct onsite presentations (optional)

Vendor Solicitation – Evaluation – Forced Ranking

Vendor	Consultant A	Consultant B	Consultant C	Consultant D	Rank Sum	Forced Rank
1	2	3	2	4	11	3
2	4	1	1	2	8	1
3	6	2	5	5	18	6
4	1	5	3	1	10	2
5	3	4	4	3	14	4
6	5	6	6	6	23	6

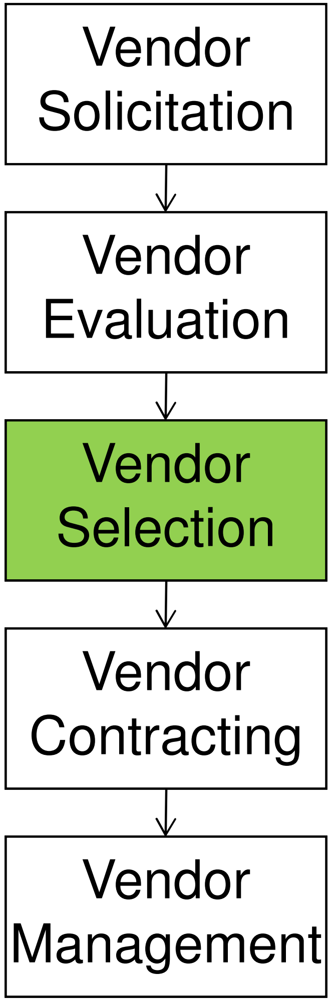
Table 3-1

Vendor Solicitation – Evaluation – Paired Comparison

	1	2	3	4	5	6	SUM	RANK
1	X	1	1	0	1	1	4	2
2	0	X	1	0	1	1	3	3
3	0	0	X	0	0	1	1	5
4	1	1	1	X	1	1	5	1
5	0	0	1	0	X	1	2	4
6	0	0	0	0	0	X	0	6

Table 3-2

Procurement Management Life Cycle



Vendor Solicitation

Vendor Evaluation

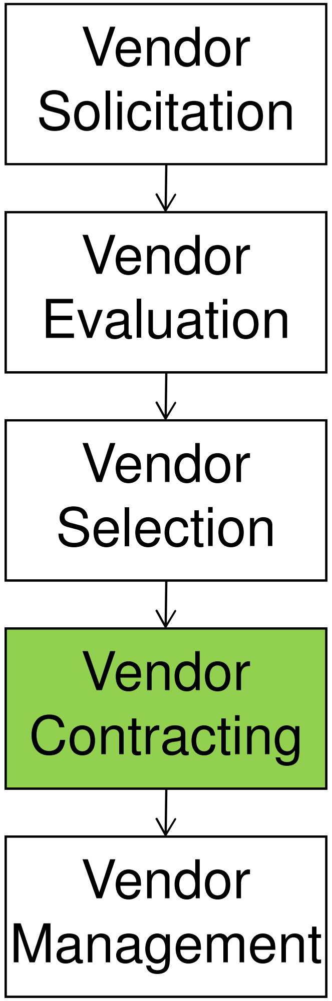
Vendor Selection

Vendor Contracting

Vendor Management

- Select the final vendor(s)

Procurement Management Life Cycle


Vendor Solicitation

Vendor Evaluation

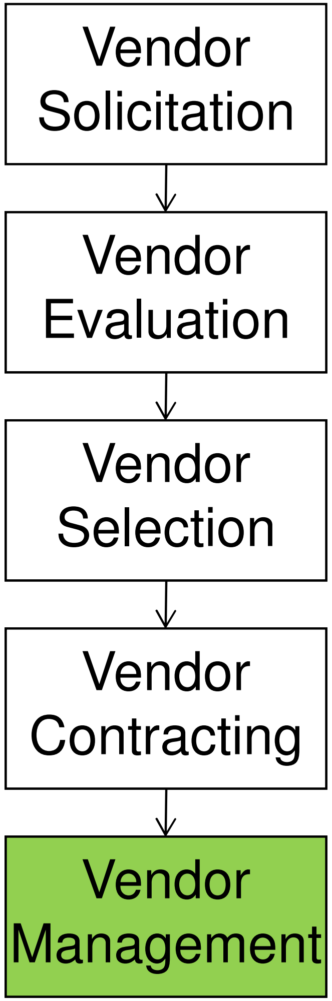
Vendor Selection

Vendor Contracting

Vendor Management

- Negotiate the final contract
    - No Award
    - Single Award
    - Multiple Awards

Procurement Management Life Cycle



- Set vendor expectations
- Monitor progress and performance
- Conduct acceptance testing
- Transition from vendor to client

Mapping Knowledge Areas to Process Groups

Knowledge Areas	Scoping Process Group	Planning Process Group	Launching Process Group	Monitoring and Controlling Process Group	Closing Process Group
INTEGRATION	X	X	X	X	X
SCOPE		X		X	
TIME		X		X	
COST		X		X	
QUALITY		X	X	X	
HR		X	X	X	
COMMUNICATIONS		X	X	X	
RISK		X		X	
PROCUREMENT		X	X	X	X

Table 3-3

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch04: How to Scope a TPM Project

Presented by
(facilitator name)

Summary of Chapter 4

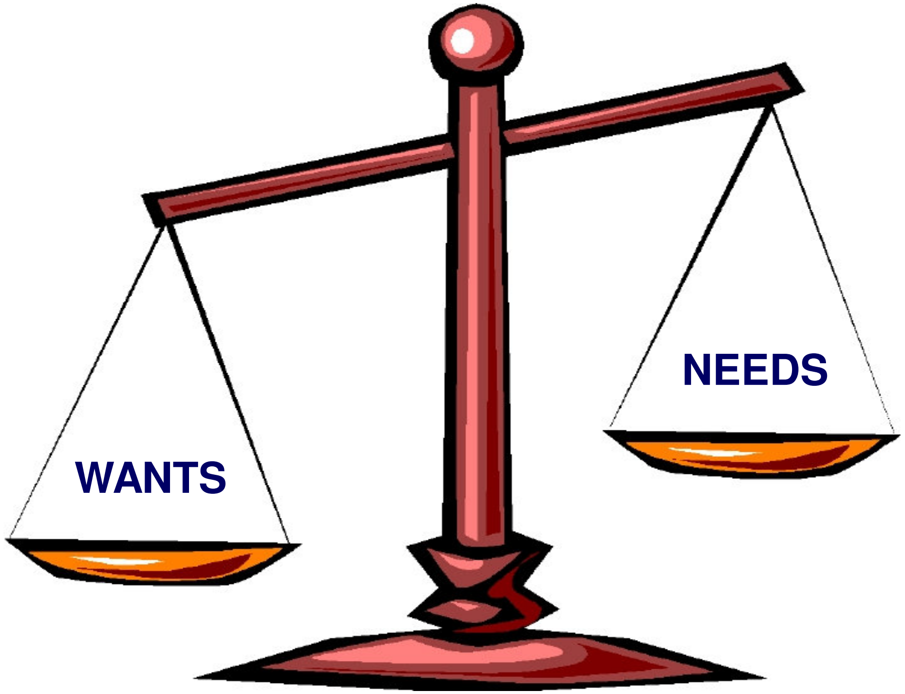
- Tools, templates, and processes to scope a project
- Managing client expectations
- Conditions of satisfaction
- The project scoping meeting
- The Requirements Breakdown Structure
- Business process diagramming
- Prototyping your solution
- Business validation
- Choosing a PMLC Model
- Writing the Project Overview Statement

Ch04: How to Scope a TPM Project

Tools, Templates, & Processes used to Scope a Project

- Conditions of Satisfaction
- Project Scoping Meting
- Requirements Gathering
- Diagramming Business Processes
- Prototyping
- Validating Business Cases
- Project Overview Statement
- Approval to Plan the Project

Client Wants vs. Client Needs Dilemma



What your client wants may not be what your client needs. Your job is to make sure that what they want is what they need and that you will deliver what they need.

Ch04: How to Scope a TPM Project

Tips to Managing Client Expectations During Scoping

- Make sure you understand what your client wants/needs/expects
- Make sure the client understands what you will do
- Assure yourself that what your client wants is what your client needs
- Actively include your client in scoping the project
- Put yourself in the shoes of your client
- Meaningfully involve your client wherever possible
- Keep your client informed of project status

Project Scoping Process

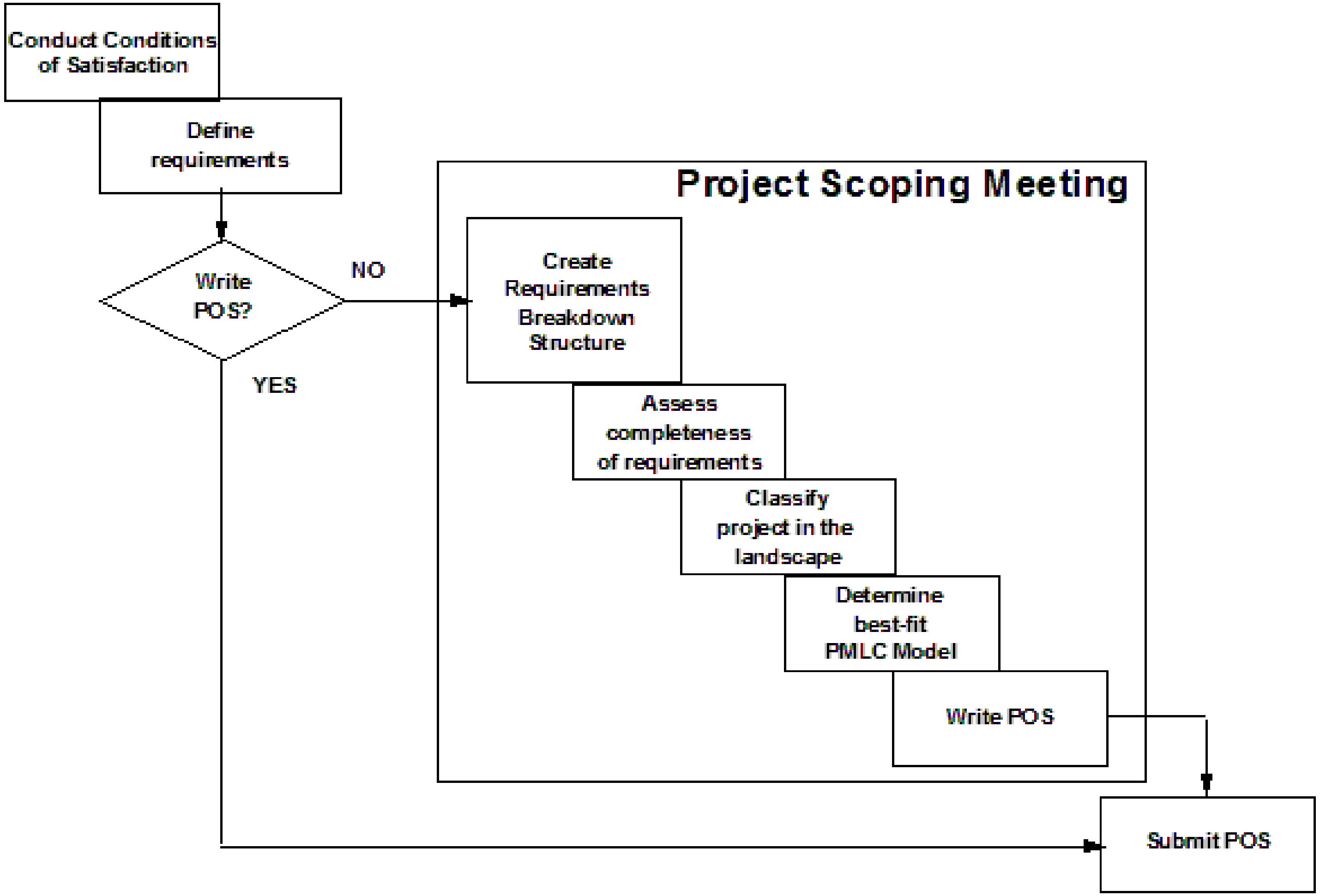
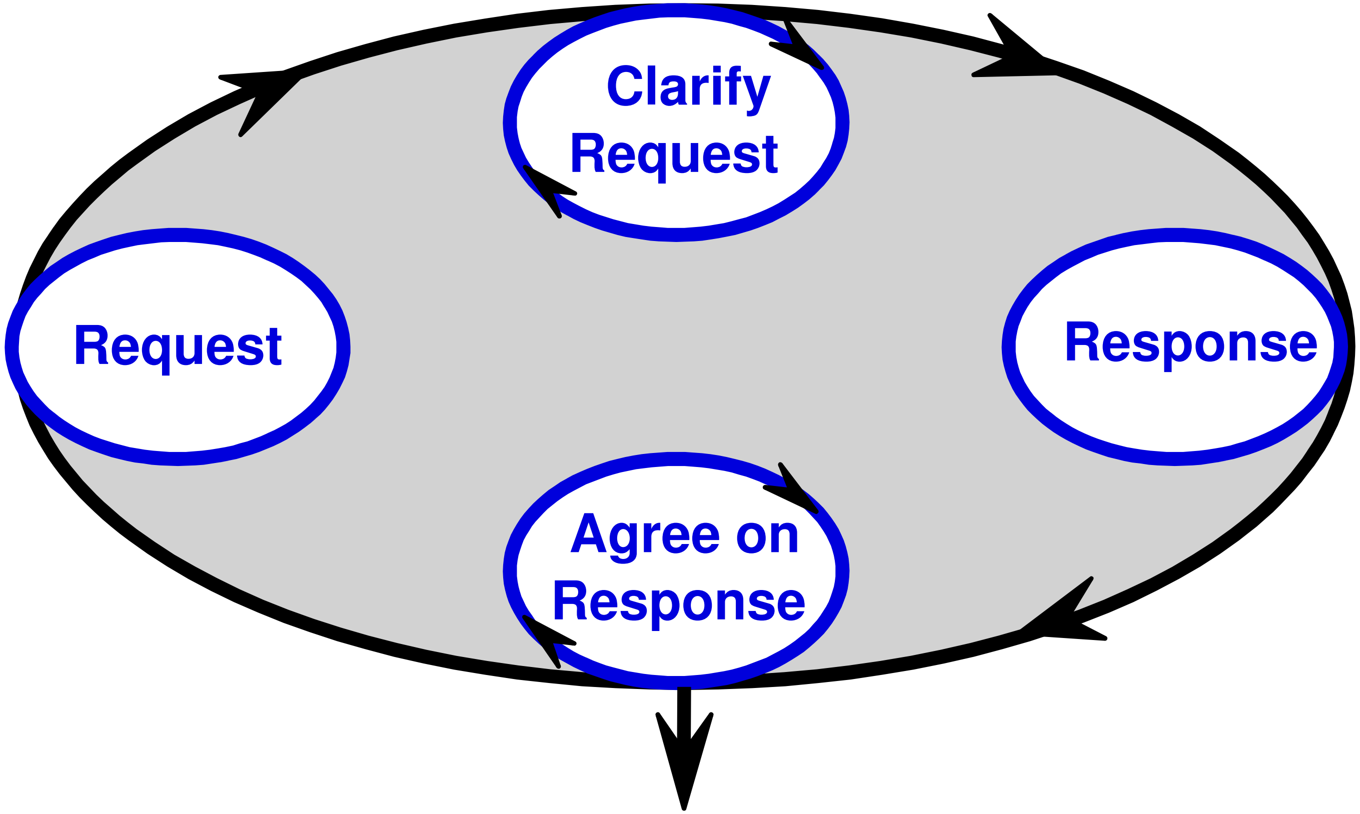

Conduct Conditions of Satisfaction
Define requirements
Write POS?
NO
YES
Project Scoping Meeting
Create Requirements Breakdown Structure
Assess completeness of requirements
Classify project in the landscape
Determine best-fit PMLC Model
Write POS
Submit POS

Figure 04-01

Establishing Conditions of Satisfaction



Negotiate agreement and
write Project Overview Statement

Figure 04-02

Planning and Conducting the Project Scoping Meeting

- Purpose
  - Document requirements
  - Project Overview Statement

- Attendees
  - Project Manager
  - Client Group
  - Core Team Members
  - The Facilitator & Technographer

Planning and Conducting the Project Scoping Meeting

- Agenda
  - Introductions
  - Purpose of the Meeting (led by Facilitator)
  - COS (conduct or review if done earlier)
  - Description of current state (led by client representative)
  - Description of problem or business opportunity (led by client representative)
  - Description of end state (led by client representative)
  - Requirements definition and documentation (led by facilitator)
  - Discussion of the gap between current and end state (led by project manager)
  - Choose best-fit project management approach to close the gap (led by project manager)
  - Draft and approve the POS (whole scope planning group)
  - Adjourn

Planning and Conducting the Project Scoping Meeting

- Deliverables
  - COS
  - Requirements Document
  - Best-fit project management life cycle (PMLC)
  - POS

What Are Requirements?

A requirement is something the product/project should do/produce or a quality that it must have.

Approaches to Requirements Gathering

- Facilitated Group Session
- Interview
- Observation
- Requirements Reuse
- Business Process Diagramming
- Prototyping
- Use Cases

Facilitated Group Session Method

Strengths

1. Excellent for cross-functional processes
2. Detailed requirements are documented and verified immediately
3. Resolves issues with an impartial facilitator

Risks

1. Untrained facilitators can lead to negative responses
2. Time and cost of planning and executing can be high

Table 04-01

Interview Method

Strengths

1. End-user participation
2. High-level description of functions and processes provided

Risks

1. Descriptions may differ from actual detailed activities
2. Without structure, stakeholders may not know what information to provide
3. Real needs ignored if analyst is prejudiced

Table 04-01

Observation Method

Strengths

1. Specific/complete descriptions of actions provided
2. Effective when routine activities are difficult to describe

Risks

1. Documenting and videotaping may be time-consuming, expensive, and have legal overtones
2. Confusing/conflicting information must be clarified
3. Misinterpretation of what is observed

Table 04-01

Requirements Reuse Method

Strengths

1. Requirements quickly generated/refined
2. Redundant efforts reduced
3. Client satisfaction enhanced by previous proof
4. Quality increase
5. Reinventing the wheel minimized

Risks

1. Significant investment to develop archives, maintenance, and library functions
2. May violate intellectual rights of previous owner
3. Similarity may be misunderstood

Table 04-01

Business Process Diagramming

Strengths

1. Excellent for cross-functional processes
2. Visual communications
3. Verification of “what is/what is not”

Risks

1. Implementation of improvement is dependent on an organization open to change
2. Good facilitation, data gathering, and interpretation required
3. Time-consuming

Table 04-01

Prototyping

Strengths

1. Innovative ideas can be generated
2. Users clarify what they want
3. Users identify requirements that may be missed
4. Client-focused
5. Early proof of concept
6. Stimulates thought process

Risks

1. Client may want to implement prototype
2. Difficult to know when to stop
3. Specialized skills required
4. Absence of documentation

Table 04-01

User Case Scenarios

Strengths

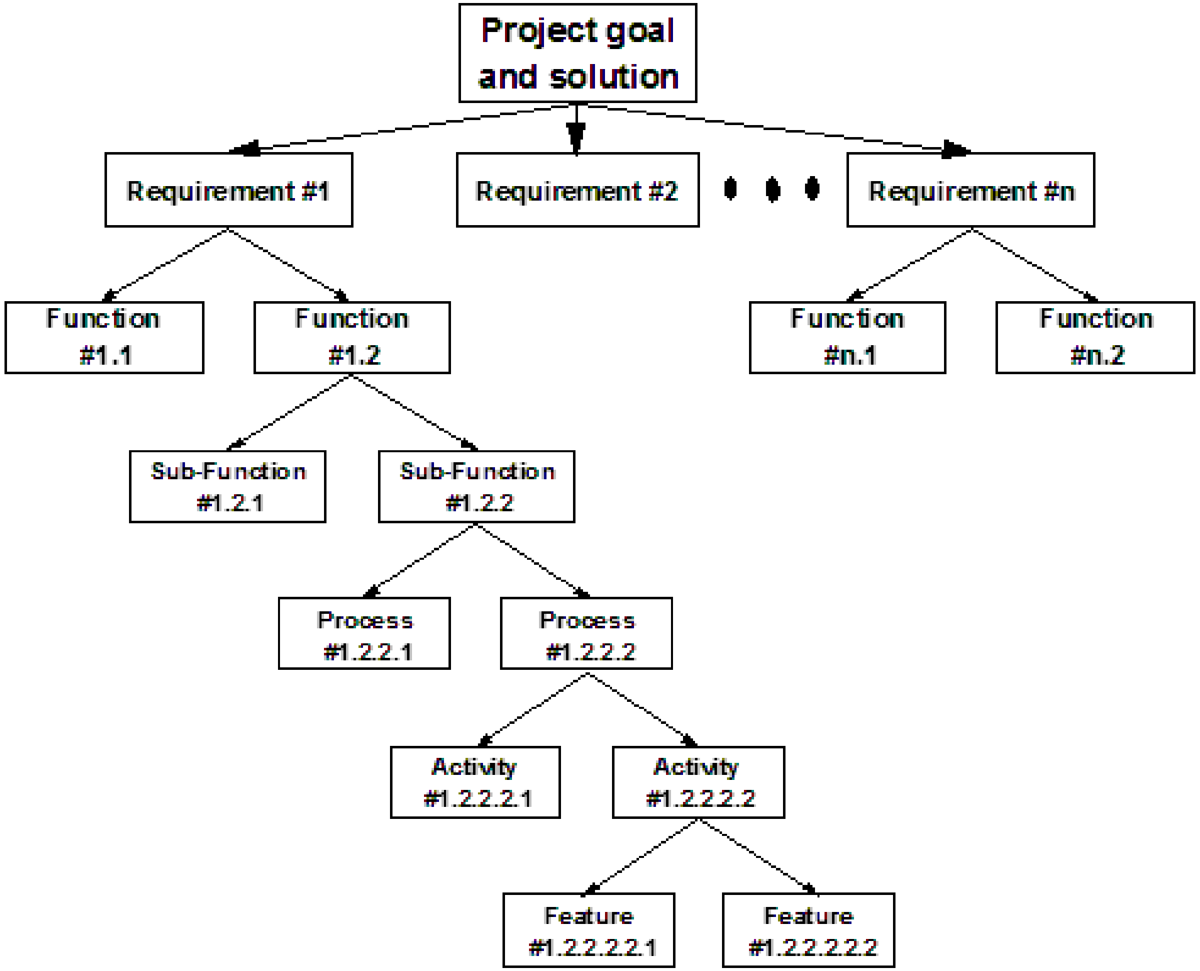
1. State of system described before entering the system
2. Completed scenarios used to describe state of system
3. Normal flow of event/exceptions revealed
4. Improved client satisfaction and design.

Risks

1. Newness has resulted in some inconsistencies
2. Information may still be missing from scenario description
3. Long interaction required
4. Training expensive

Table
04-01

Building the Requirements Breakdown Structure



Project goal and solution

Requirement #1

Requirement #2

• • •

Requirement #n

Function #1.1

Function #1.2

Function #n.1

Function #n.2

Sub-Function #1.2.1

Sub-Function #1.2.2

Process #1.2.2.1

Process #1.2.2.2

Activity #1.2.2.2.1

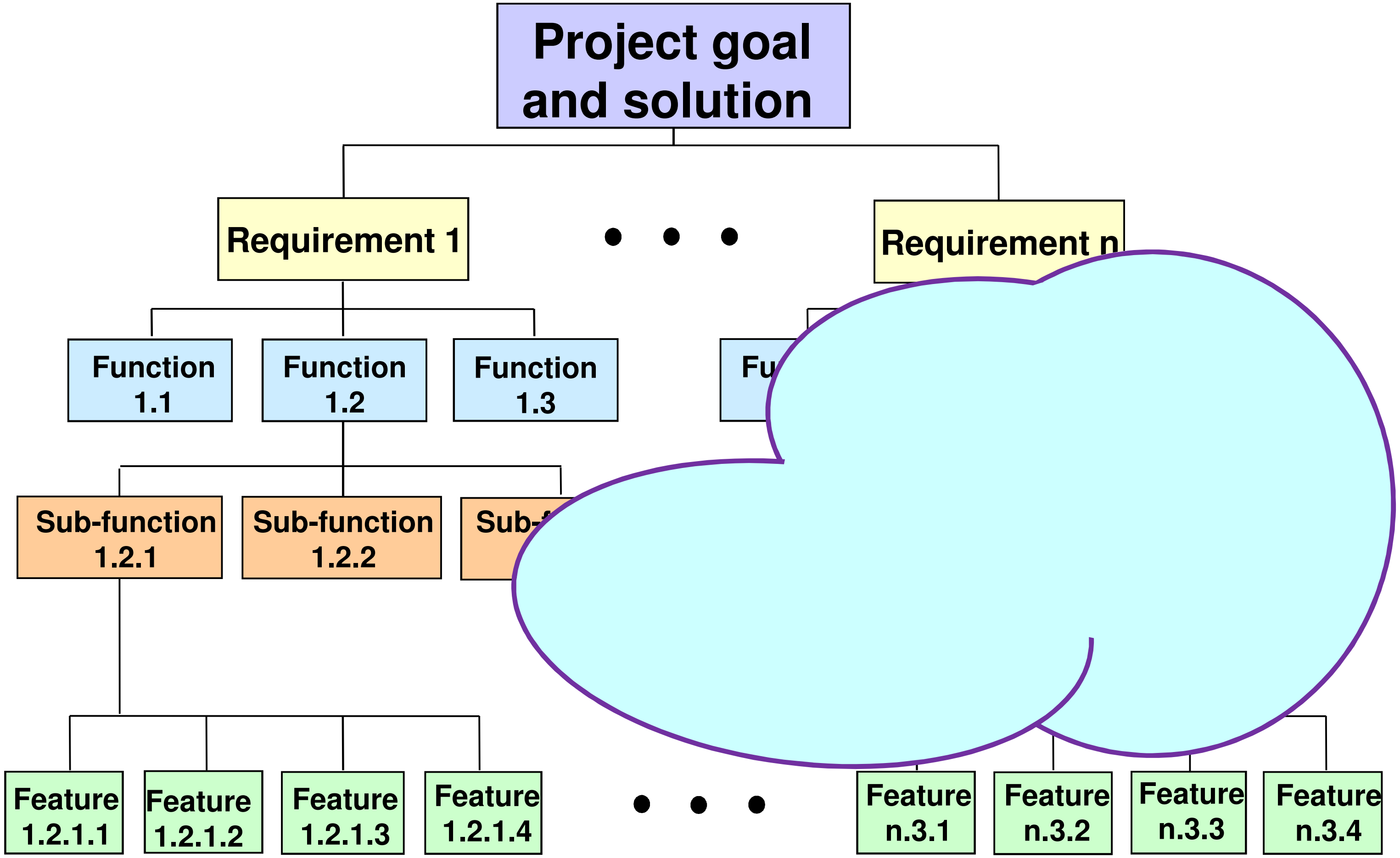
Activity #1.2.2.2.2

Feature #1.2.2.2.2.1

Feature #1.2.2.2.2.2

Figure 04-03

RBS – The Reality



Characteristics of the RBS

- The RBS is intuitive and most meaningful to the client
- The RBS is a deliverables-based approach
- The RBS is consistent with the PMI PMBOK
- The RBS remains client-facing as long as possible into the planning exercise

Advantages of using the RBS

- Does not require a trained facilitator
- Does not require learning one of the contemporary approaches to requirements gathering
- Presents an intuitive approach to gathering requirements
- Allows the client to work with the project team in an environment familiar to them, i.e., to stay in their own comfort zone
- Paints a clear picture of the degree to which the solution is clearly defined
- Provides the input needed to choose the best fit PMLC model

Verifying Attributes

- **Completeness** – Are the requirements essentially complete or are some missing?
- **Clarity** – Are the requirements clear? Are they ambiguous or imprecise?
- **Validity** – Do the requirements reflect client intentions?
- **Measurability** – Does the requirement have a fit criterion (measurement)?
- **Testability** – Can the criterion be used to test whether the requirement provides the solution?

Verifying Attributes (continued)

- **Maintainability** – Will the implementation be difficult or easy to understand or maintain?
- **Reliability** – Can the reliability and availability requirements be met?
- **Look and Feel** – Have all human factors been met (GUI, ergonomics, etc.)?
- **Feasibility** – Can the requirements be implemented?
- **Precedent** – Has a requirement similar to this been implemented before?

Verifying Attributes (continued)

- **Scale** – Are the requirements large and/or complex?
- **Stability** – How often and to what degree might the requirements change?
- **Performance** – Can the performance be met on a consistent basis?
- **Safety** – Can the safety requirements be fully demonstrated?
- **Specifications** – Is the documentation adequate to design, implement, and test the system?

The Challenge of Requirements Management

- Not always obvious
- Come from many sources
- Not always easy to express clearly in words
- Many different types of requirements at different levels of detail
- Number of requirements can become unmanageable if not controlled
- Requirements are not independent and may create conflict situations
- Many interested and responsible parties
- Change as a result of changing business conditions
- Can be time-sensitive

What to do to get requirements gathering started

Sometimes the client has trouble envisioning a solution or senior management is not convinced that this project makes business sense.

If so, then consider:

- Diagramming business processes
- Prototyping
- Business validation

What is a Business Process?

A *business process* is a collection of activities that take one or more inputs from one or more different sources and produces a change of state that delivers business value.

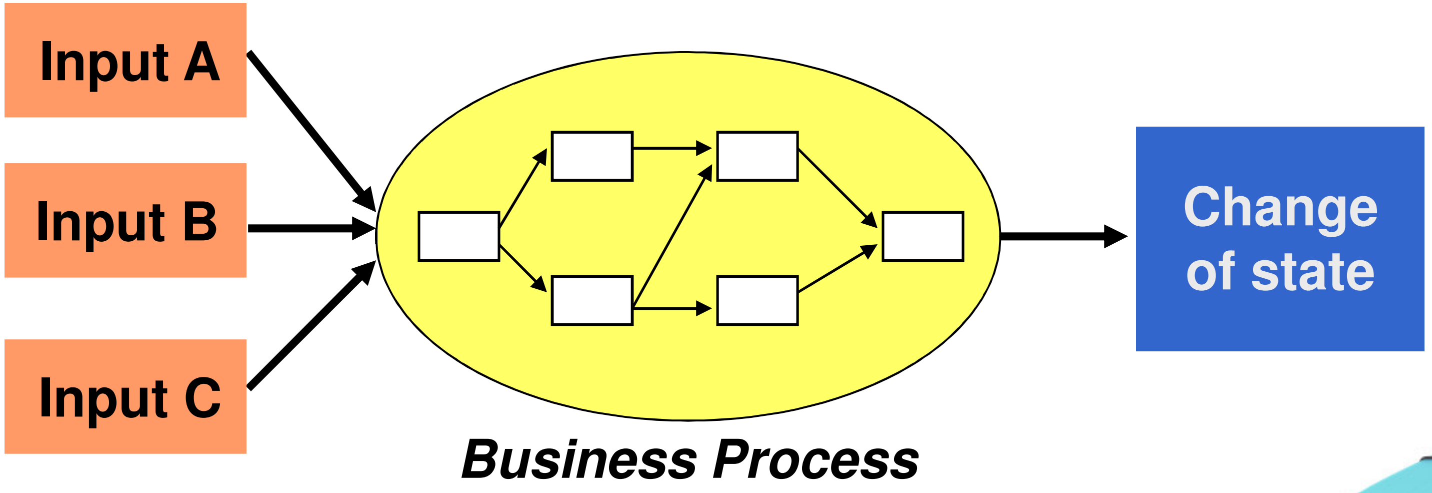


Figure 04-04

What is a Business Process?

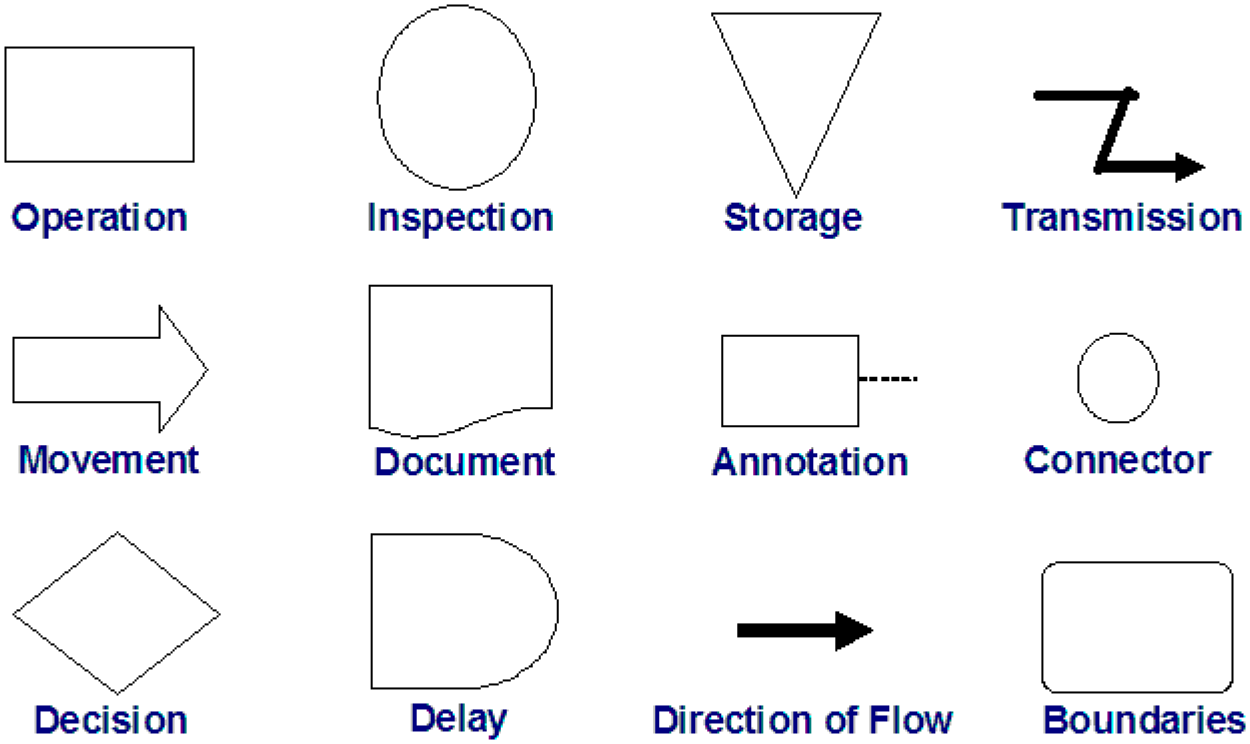


Figure 04-05

The Top-Down, Left-to-Right Format

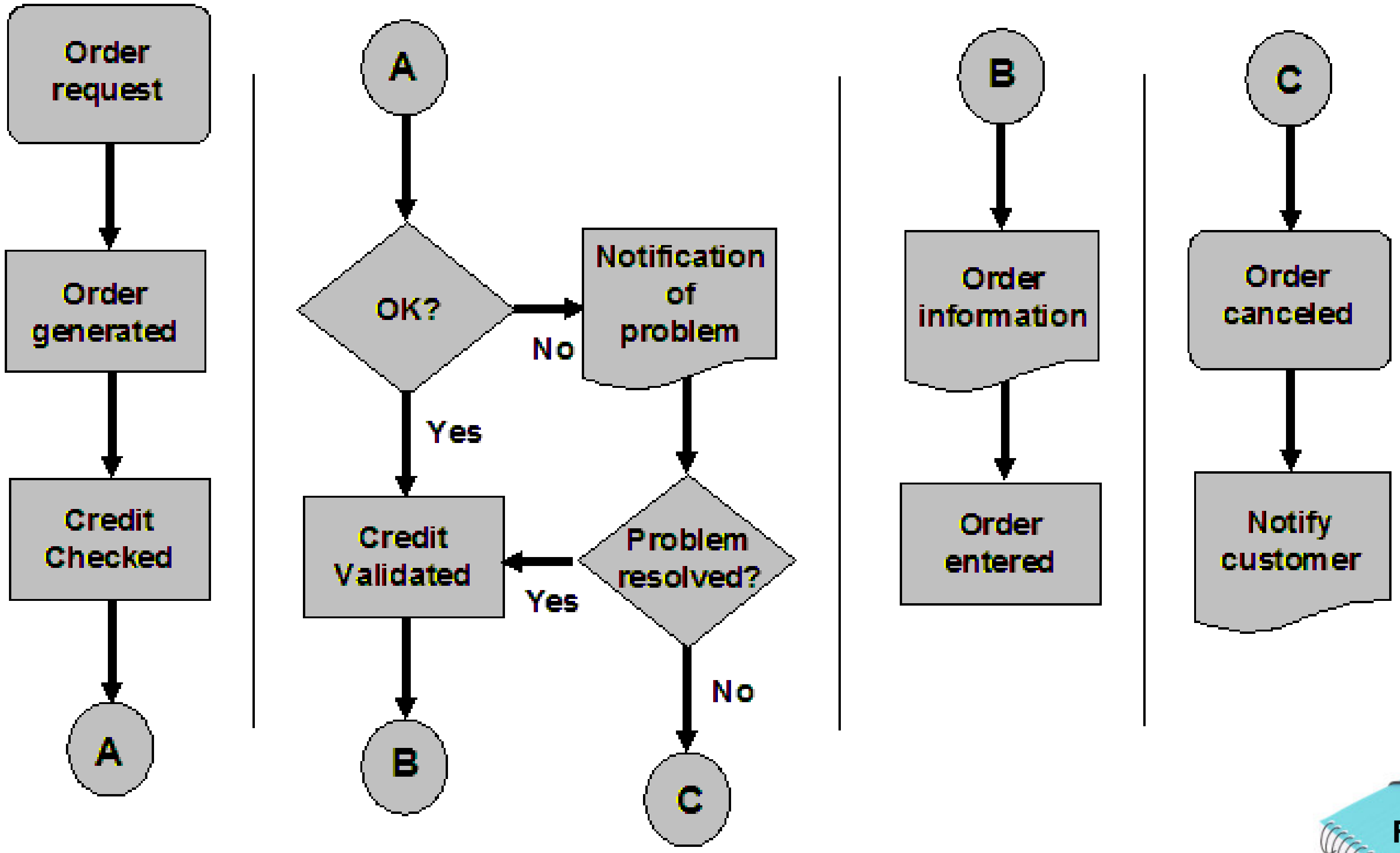


Figure 04-06

The Swim-Lane Format

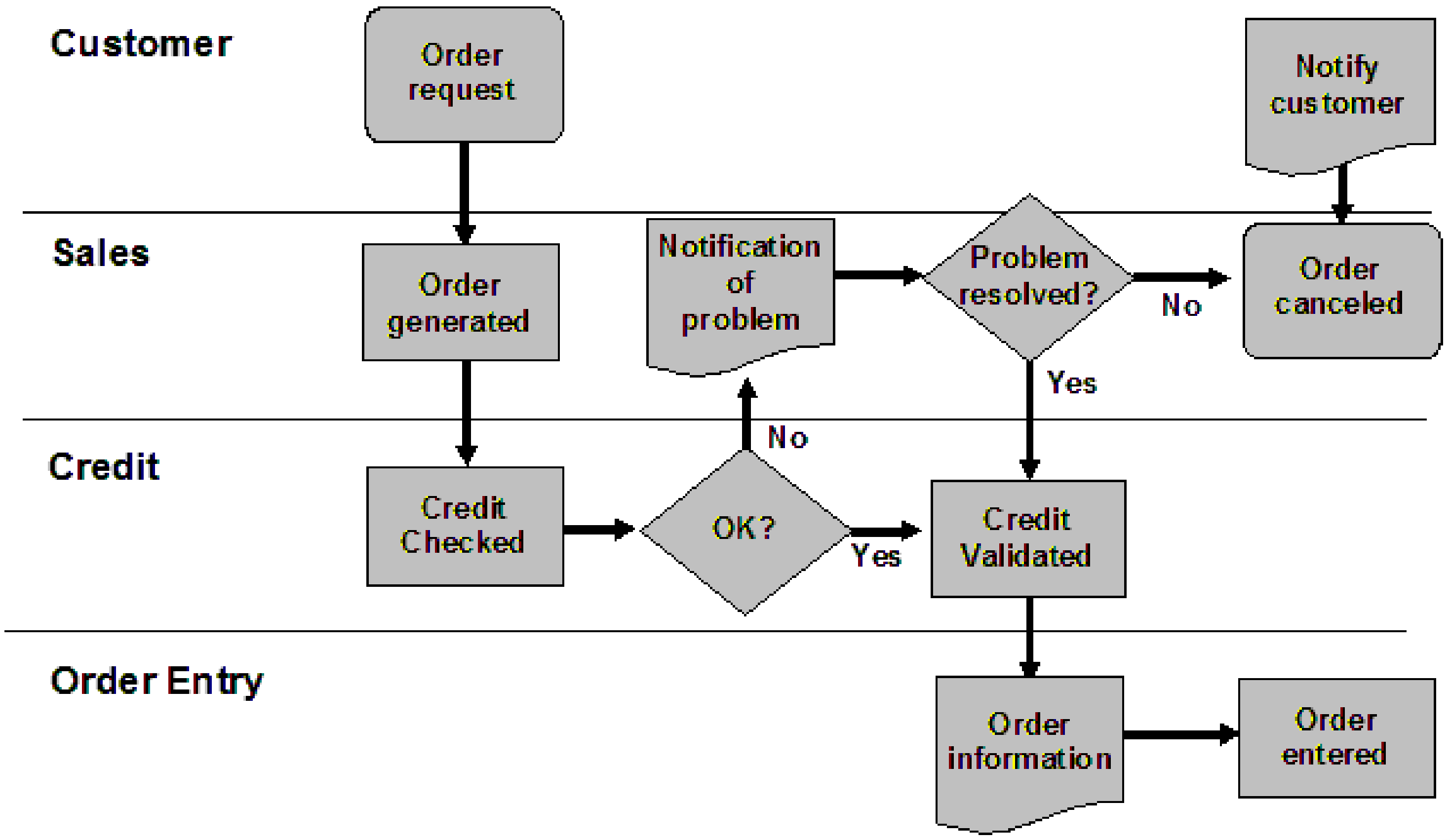


Figure 04-07

Context Diagramming Process

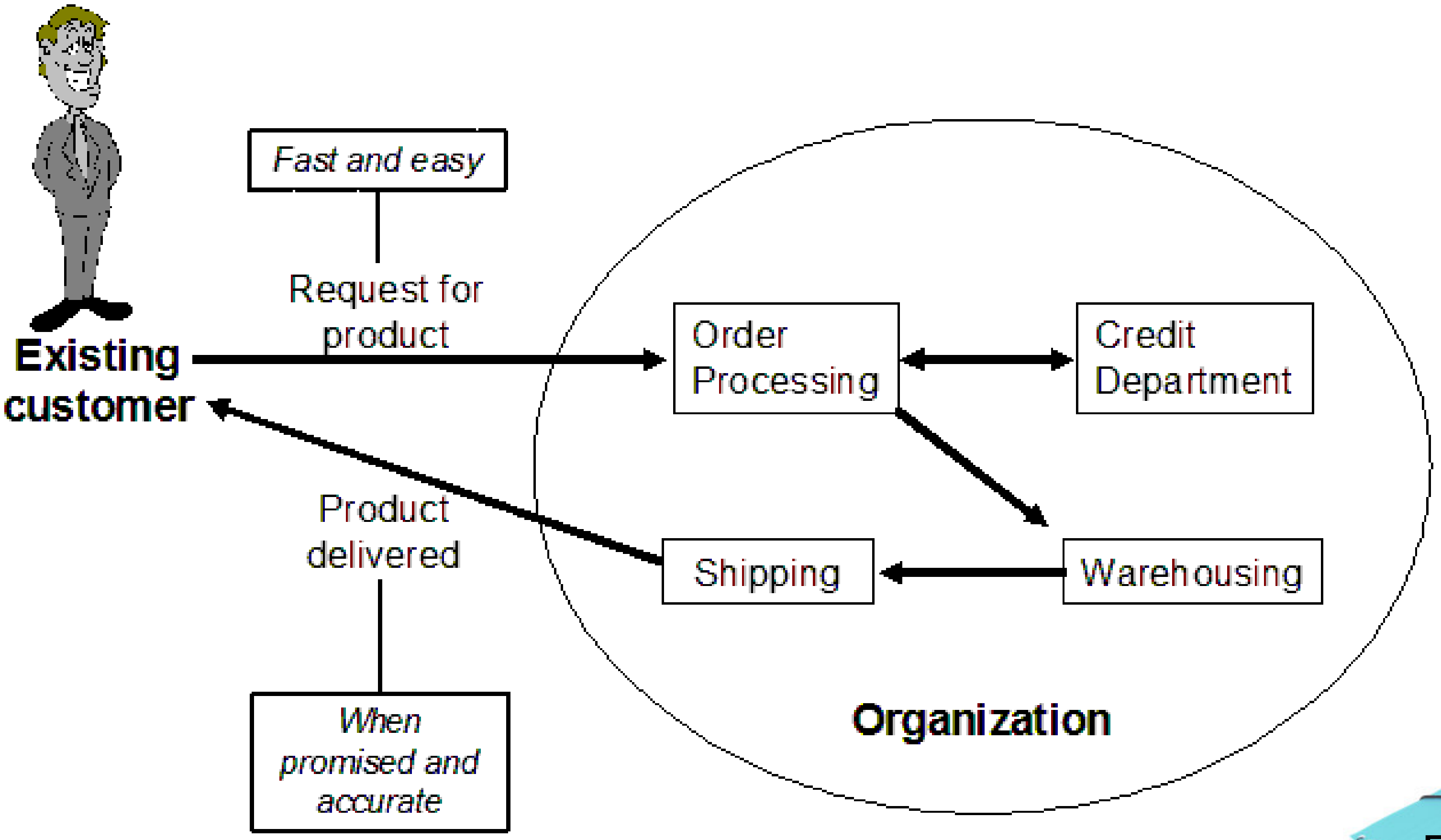
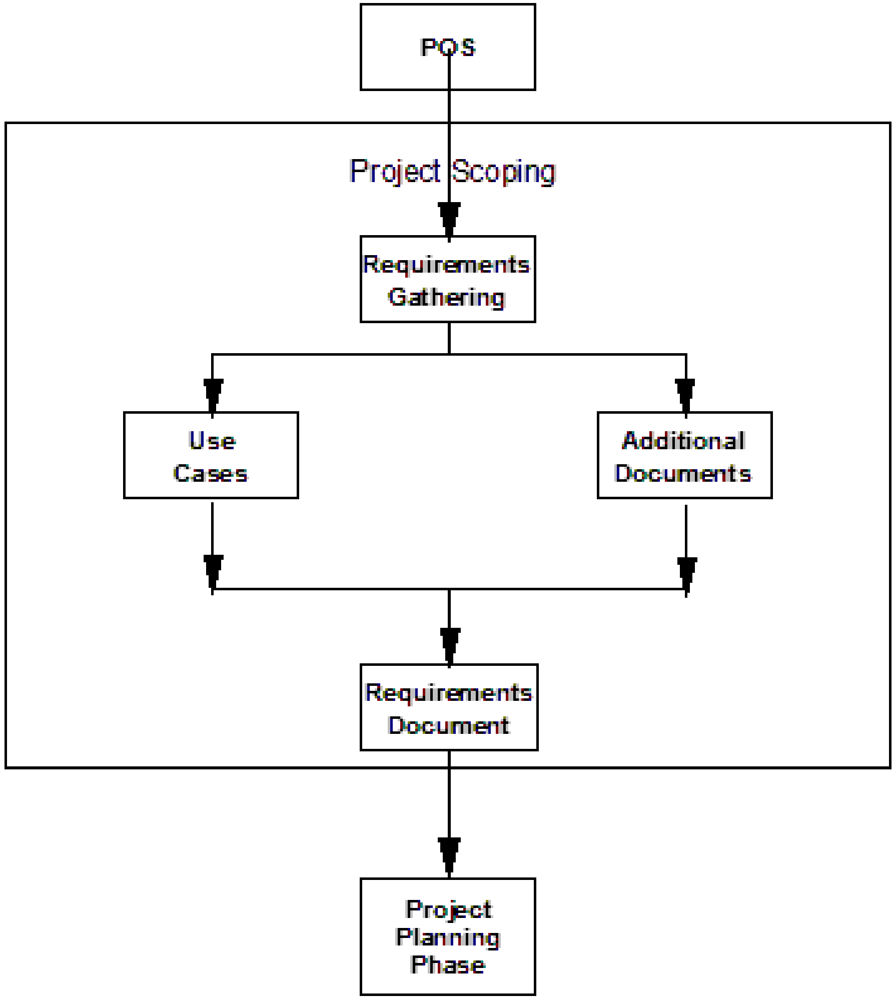


Figure 04-08

What is a Business Process?


POS

Project Scoping

Requirements Gathering

Use Cases

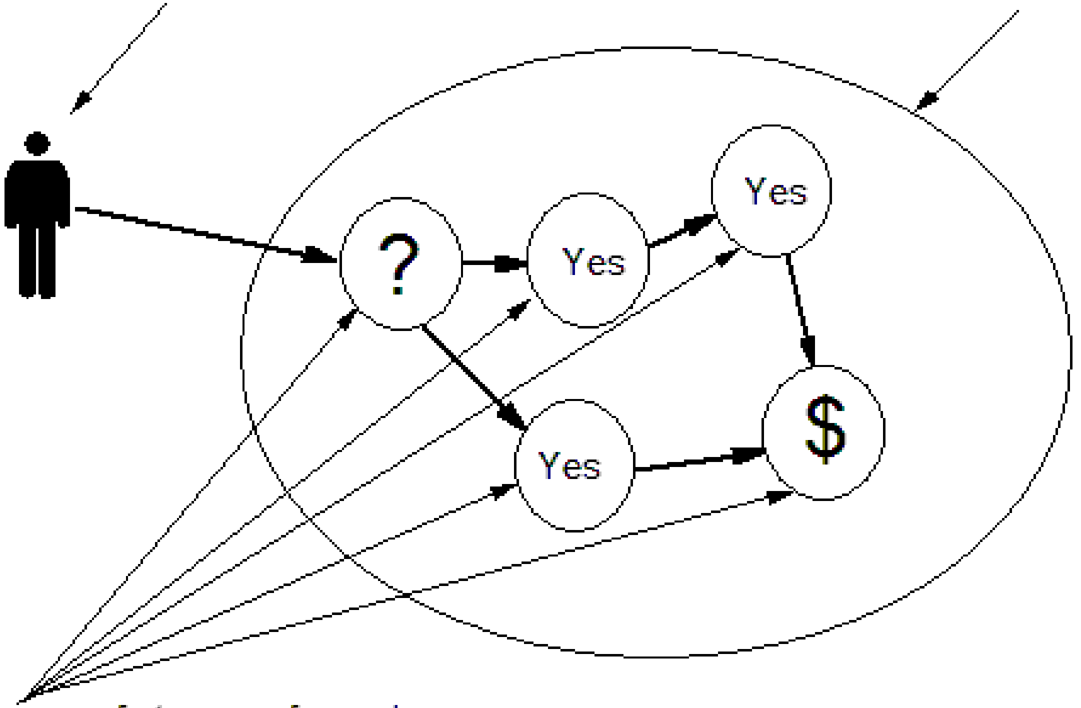
Additional Documents

Requirements Document

Project Planning Phase

Figure 04-09

What is a Business Process?



Actor: Someone or something outside the system that interacts with the system

The System

Use Case: A sequence of steps performed by the system to produce value for the actor

Figure 04-10

Categories of Requirements

- Functional
- Non-functional
- Global
- Product/project constraints

Definition: Functional Requirement

Functional requirements specify what the product or service must do.

Give an example of a functional requirement.

Definition: Non-Functional Requirement

Non-functional requirements demonstrate properties that the product or service should have in order to do what must be done.

Give an example of a non-functional requirement.

Definition: Global Requirement

Global requirements describe the highest level of requirements within the system or product. They can be thought of as general requirements.

Give an example of a global requirement.

Ch04: How to Scope a TPM Project

Definition: Product/Project Constraints

Product/project constraints are those requirements that, on the surface, resemble design constraints or project constraints.

Give an example of a product/project constraint.

Hints on deciding which PMLC Model to use

- The degree to which the RBS is complete is the major factor in deciding which PMLC model to use.
- Consider using the highest level of decomposition in the Objective section of the POS and leaving creation of the RBS and WBS for the Planning Phase.
- The highest level requirements could be those that deliver business value. Senior managers might prefer this.

When to use each PMLC Model

PMLC Model Type	When to Use It
Linear	The solution and requirements are clearly defined.
	You do not expect too many scope change requests.
	The project is routine and repetitive.
	You can use established templates.
Incremental	Same conditions as the Linear approach, but the client wants to deploy business value incrementally.
	There may be some likelihood of scope change requests.
Iterative	You feel that requirements are not complete or may change.
	You will learn about remaining requirements in the course of doing the project.
	Some features of the solution are not yet identified.
Adaptive	The solution and requirements are only partially known.
	There may be functionality that is not yet identified.
	There will be a number of scope changes from the client.
	The project is oriented to new product development or process improvement.
	The development schedule is tight and you can't afford rework or re-planning.
Extreme	The goal and solution are not clearly known.
	The project is an R & D type project.

Purpose of the Project Overview Statement

A one-page description that is:

- A general statement of the project
- A reference for the planning team
- A decision aid for the project
- To get management approval to plan the project

Contents of the Project Overview Statement

Problem/Opportunity

Project Goal

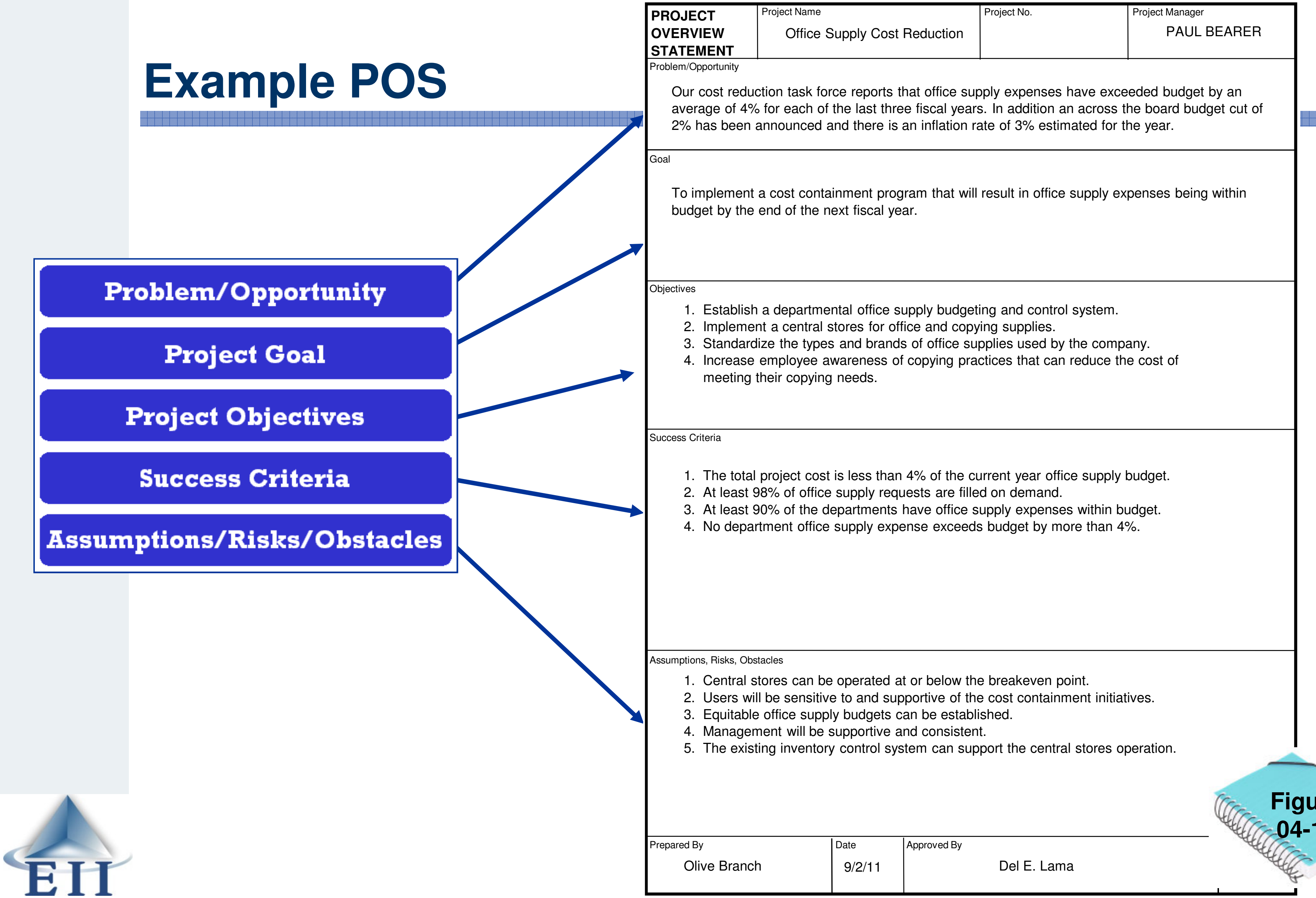
Project Objectives

Success Criteria

Assumptions/Risks/Obstacles

Ch04: How to Scope a TPM Project

Example POS



Problem/Opportunity

Project Goal

Project Objectives

Success Criteria

Assumptions/Risks/Obstacles

PROJECT OVERVIEW STATEMENT	Project Name Office Supply Cost Reduction	Project No.	Project Manager PAUL BEARER

Problem/Opportunity

Our cost reduction task force reports that office supply expenses have exceeded budget by an average of 4% for each of the last three fiscal years. In addition an across the board budget cut of 2% has been announced and there is an inflation rate of 3% estimated for the year.

Goal

To implement a cost containment program that will result in office supply expenses being within budget by the end of the next fiscal year.

Objectives

1. Establish a departmental office supply budgeting and control system.
2. Implement a central stores for office and copying supplies.
3. Standardize the types and brands of office supplies used by the company.
4. Increase employee awareness of copying practices that can reduce the cost of meeting their copying needs.

Success Criteria

1. The total project cost is less than 4% of the current year office supply budget.
2. At least 98% of office supply requests are filled on demand.
3. At least 90% of the departments have office supply expenses within budget.
4. No department office supply expense exceeds budget by more than 4%.

Assumptions, Risks, Obstacles

1. Central stores can be operated at or below the breakeven point.
2. Users will be sensitive to and supportive of the cost containment initiatives.
3. Equitable office supply budgets can be established.
4. Management will be supportive and consistent.
5. The existing inventory control system can support the central stores operation.

Prepared By	Date	Approved By
Olive Branch	9/2/11	Del E. Lama

Figure 04-11

POS Problem/Opportunity

A problem needing resolution or an untapped business opportunity.

A statement of fact that everyone would agree to. It stands on its own.

This is the foundation on which the proposed project will be based.

POS Project Goal

A one or two sentence statement of how you intend to address the stated problem/opportunity.

A scoping statement that bounds the project you are proposing.

POS Project Objectives

- 5 or 6 brief statements that further bound your project goal statement.
- From these statements it is clear what is in and not in the proposed project.
- These statements might identify major project deliverables.
- These statements form a necessary and sufficient set of objectives.

POS Project Success Criteria

IRACIS

IR	Increase Revenue
AC	Avoid Costs
IS	Improve Service

Use quantitative metrics only!
How much and by when?

POS Assumptions, Risks, and Obstacles

- Technological
  - New to the company
  - Obsolescence
- Environmental
  - Management change
  - Staff turnover
- Interpersonal
  - Working relationships
- Cultural
  - Fit to the company
- Causal Relationships
  - Will the solution solve the problem

POS Attachments

- Risk Analysis
- Financial Analyses
  - Feasibility studies
  - Cost/benefit analysis
  - Breakeven analysis
  - Return on inverstment

Gaining Approval to Plan the Project

- Expected Review Questions from Management
  - How important is the problem or opportunity to the organization?
  - How is the project related to our CSFs?
  - Does the goal statement related directly to the problem or opportunity?
  - Are the objectives clear representations of the goal statement?
  - Is there sufficient business value as measured by the success criteria to warrant further expenditures on this project?
  - Is the relationship between the project objectives and the success criteria clearly established?
  - Are the risks too high and the business value too low?
  - Can senior management mitigate the identified risks?

Participants in the Approval Process

- Core project team
- Project team
- Project manager
- Resource managers
- Function/process managers
- Client
- Senior management

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch05: How to Plan a TPM Project

Presented by
(facilitator name)

Summary of Chapter 5

- Tools, templates, and processes to plan a project
- The importance of planning
- Using application software packages to plan projects
- Planning & conducting the Joint Project Planning Session (JPPS)
- Writing a Project Description Statement
- Building the Work Breakdown Structure (WBS)
- Estimating task duration
- Estimating resource requirements
- Estimating cost
- Constructing the project network diagram
- Writing an effective project proposal
- Gaining approval to launch the project

The Pain Curve

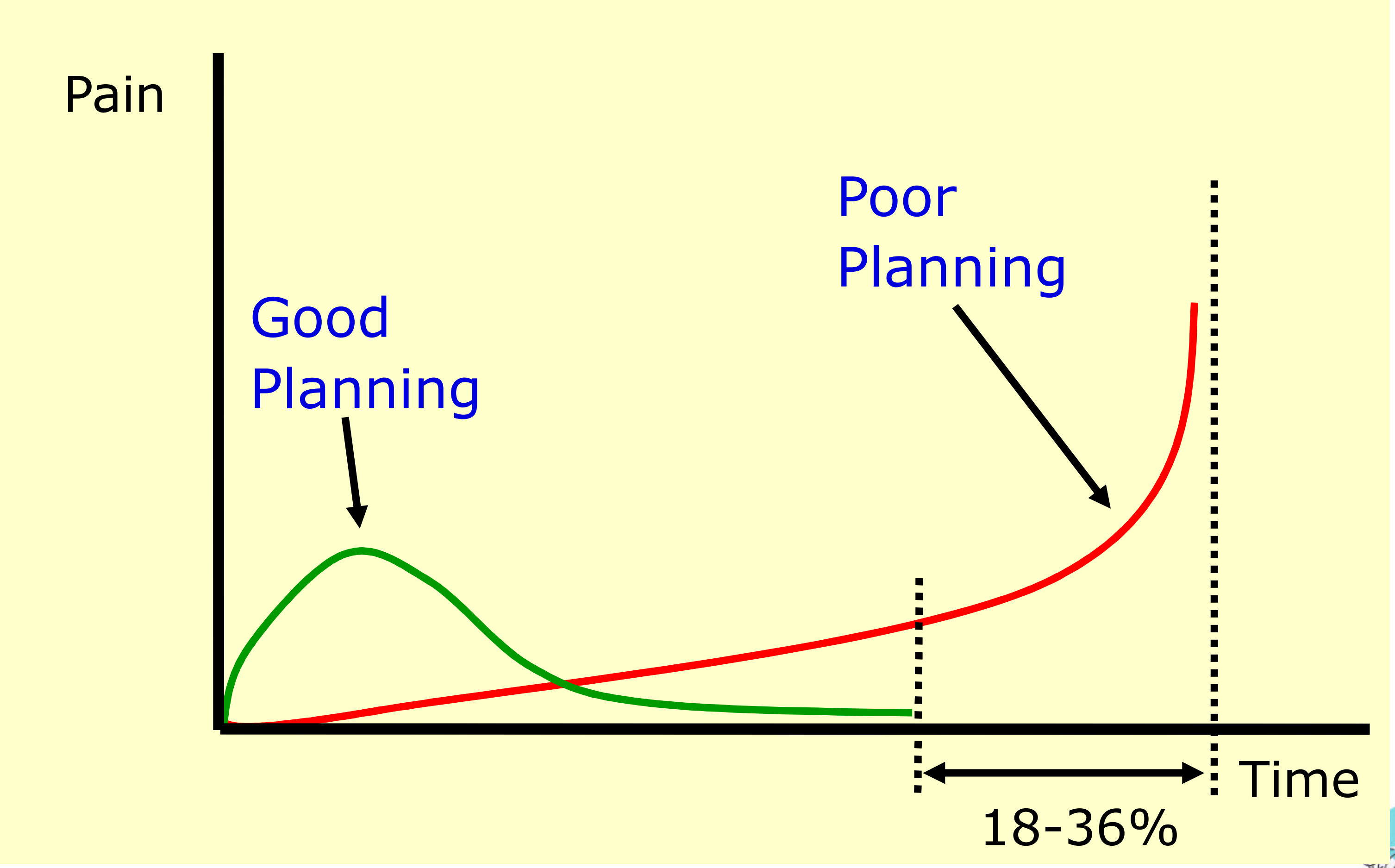
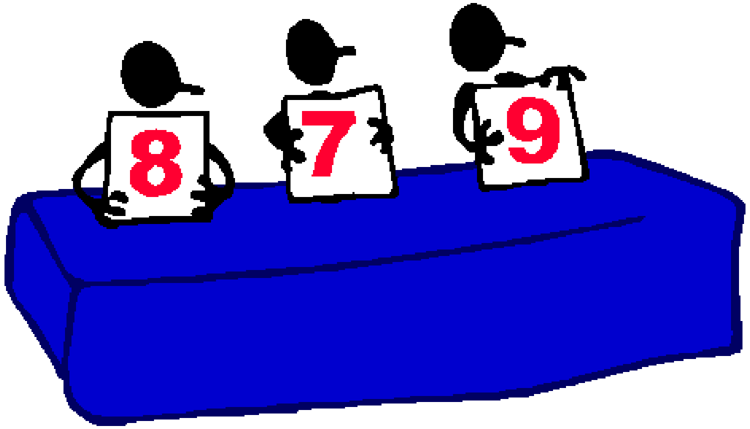


Figure 05-01

The Importance of Planning

- Planning Reduces Uncertainty
- Planning Increases Understanding
- Planning Improves Efficiency



Using Software Packages to Plan a Project

- Yes
  - Very large projects
  - Distributed teams
  - Extensive use of vendors and contractors

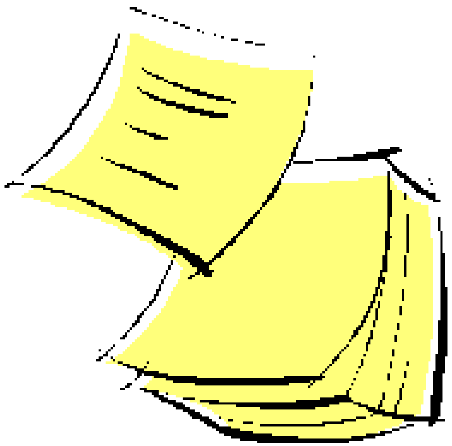
- No
  - Small projects
  - Short duration project increments
  - Adds too much non-value-added work
  - Frequent scope and requirements changes

Project Planning Tools

- Sticky notes (assorted colors)
- Marking pens (assorted colors)
- Plenty of whiteboard space

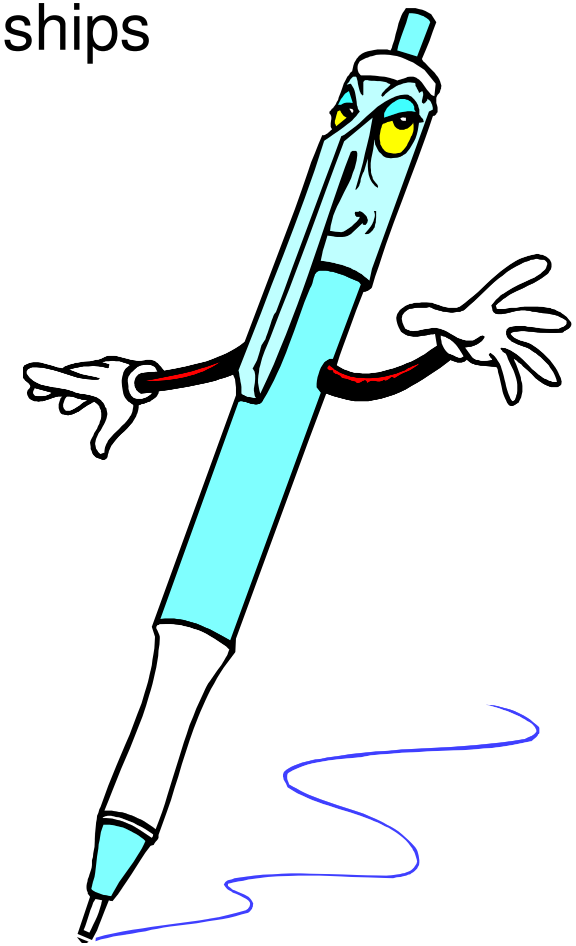
Uses for Sticky Notes

- Task ID
- Unique task name
- Task duration
- Task labor
- Resource requirements
- Task manager
- ES, EF, LS, and LF (calculated values)
- Critical Path (calculated)



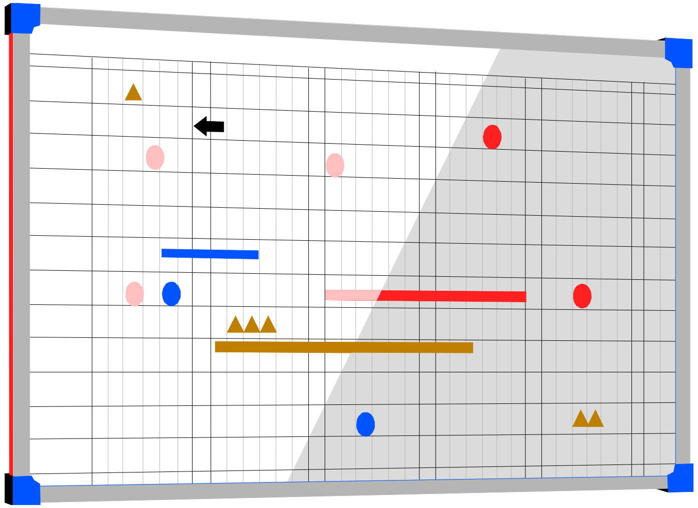
Uses for Marking Pens

- Define dependency relationships
- Identify the critical path



Uses for the Whiteboard

- Project Overview Statement
- Work Breakdown Structure
- Dependency Diagram
- Initial Project Schedule
- Final Project Schedule
- Resource Schedule
- Issues Log
- Updated Project Schedule



How Much Time Should Planning Take?

Very small projects	< ½ day
Small projects	< 1 day
Medium projects	2 days
Large projects	3-4 days
Very large projects	???

The JPPS Meeting Components

- Attendees
- Facilities
- Equipment
- Agenda
- Deliverables
- Project Proposal

The JPPS Attendees

- Facilitator
- Project manager
- Another project manager
- JPP consultant
- Technographer
- Core project team
- Client representative
- Resource managers
- Project champion
- Functional managers
- Process owner

The JPPS Facilities & Equipment

- Facilities
  - Comfortable
  - Away from interruptions (offsite or onsite)
  - Breakout rooms?
- Equipment
  - Breakout group work areas (table, chairs, flip charts)
  - Whiteboards
  - Projection equipment

The Complete JPPS Agenda

- Session #1
  - Negotiate the COS or generate the RBS
- Session #2
  - Write the POS
- Session #3
  - Part 1: Kick-off
  - Part 2: Working session

Who’s Involved in the Planning Process?

➢ Session #1	Project Manager Client
➢ Session #2	Project Manager Client Project Team (known members)
➢ Session #3	Project Manager Entire Project Team

The JPPS Agenda – Session #3 Planning Kick-off

- Introduction of Sponsor
- Sponsor overview of the project and its importance to the company/division/department
- Introduction of the client co-project manager
- Introduction of the IT co-project manager
- Introduction of the core project team
- Introduction of the planning facilitation team (facilitator and technographer)

JPPS Agenda – Session #3 Working session

- Validation & prioritization of requirements
- Overview of the project planning approach to be taken
- Generation and validation of the WBS
- Estimate duration, labor, and resource requirements
- Creation of the dependency diagram
- Discuss critical path and project completion date
- Analysis and schedule compression as needed
- Identification of project risks and mitigation plans
- Planning team consensus on project plan contents
- Adjournment

Planning Session Deliverables

- Project Definition Statement
- Work Breakdown Structure
- Task duration estimates
- Resource requirements
- Project network schedule
- Task Schedule
- Resource assignments
- Project Notebook
- Project proposal
    - Background
    - Objective
    - Overview of approach to be taken
    - Detailed statement of work
    - Time and cost summary
    - Appendices

Writing a Project Definition Statement

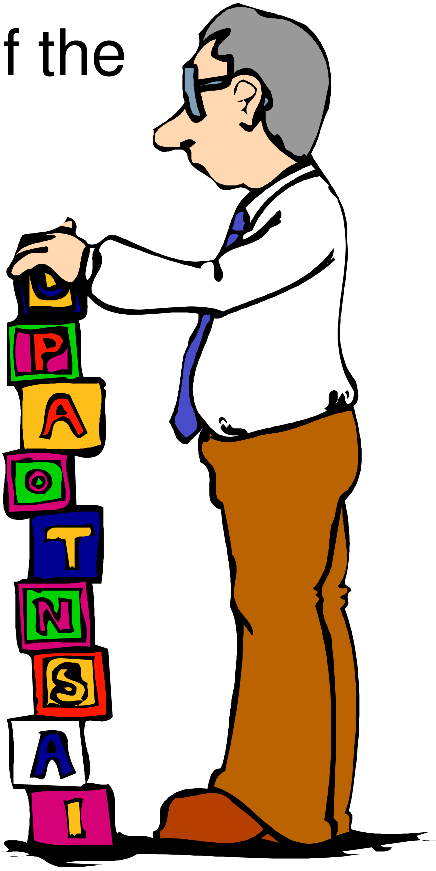
- Same five parts as the POS
- A more detailed project definition from the team’s perspective
- Several pages long
- To make sure the team has a common understanding of what the project is all about

The Role of the Client in the JPPS

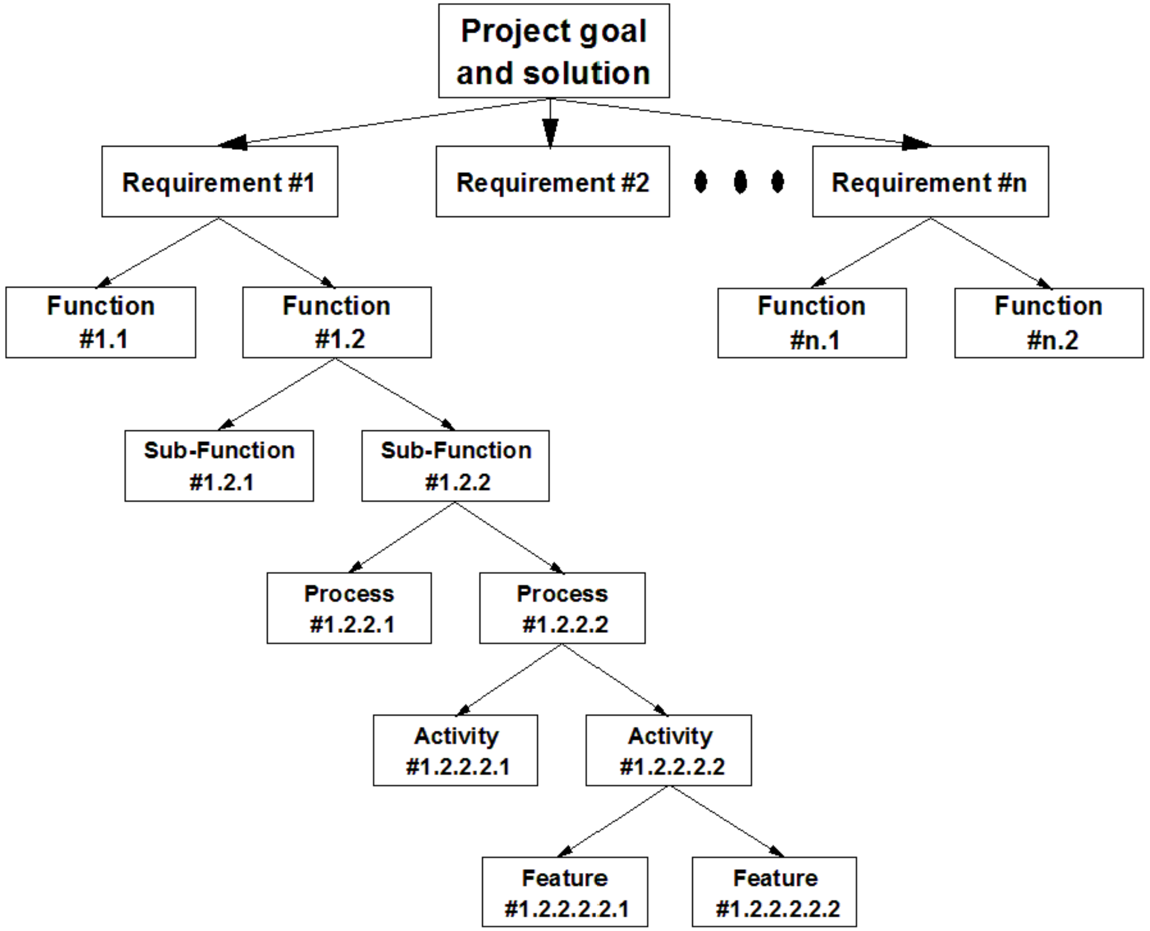
- The client or their representative **must** be present.
- Validation of requirements and POS
- Prioritizing requirements (MoSCoW)
- Generating and validating the WBS
- Commitment of resources from the client
- Agreement on the project plan
- Client must own the project plan
- Meaningful involvement by the client

Definition of the WBS

The Work Breakdown Structure (WBS) is a hierarchical description of all of the work that must be done to meet the needs of the client.



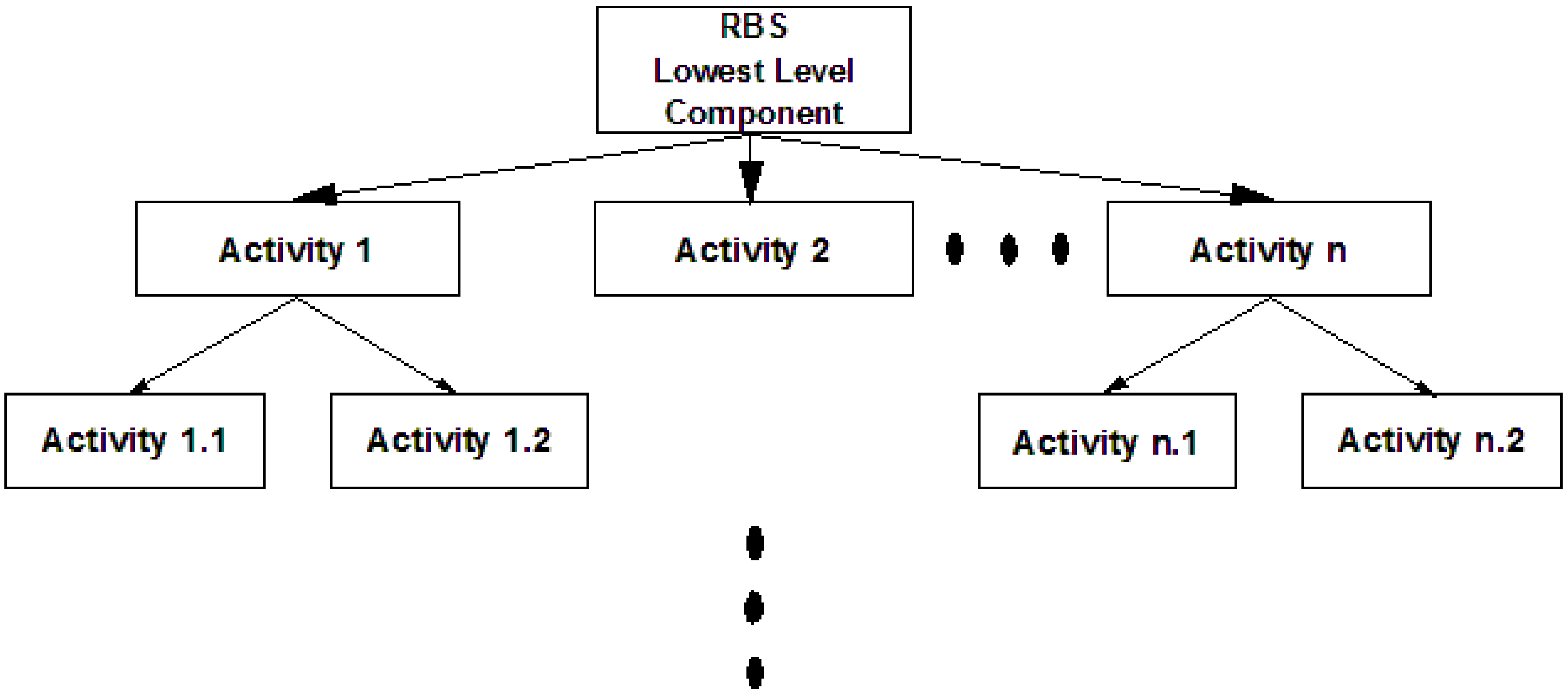
The RBS



- Project goal and solution
  - Requirement #1
    - Function #1.1
    - Function #1.2
      - Sub-Function #1.2.1
      - Sub-Function #1.2.2
        - Process #1.2.2.1
        - Process #1.2.2.2
          - Activity #1.2.2.2.1
          - Activity #1.2.2.2.2
            - Feature #1.2.2.2.2.1
            - Feature #1.2.2.2.2.2
  - Requirement #2
  - • • •
  - Requirement #n
    - Function #n.1
    - Function #n.2

Figure 05-02

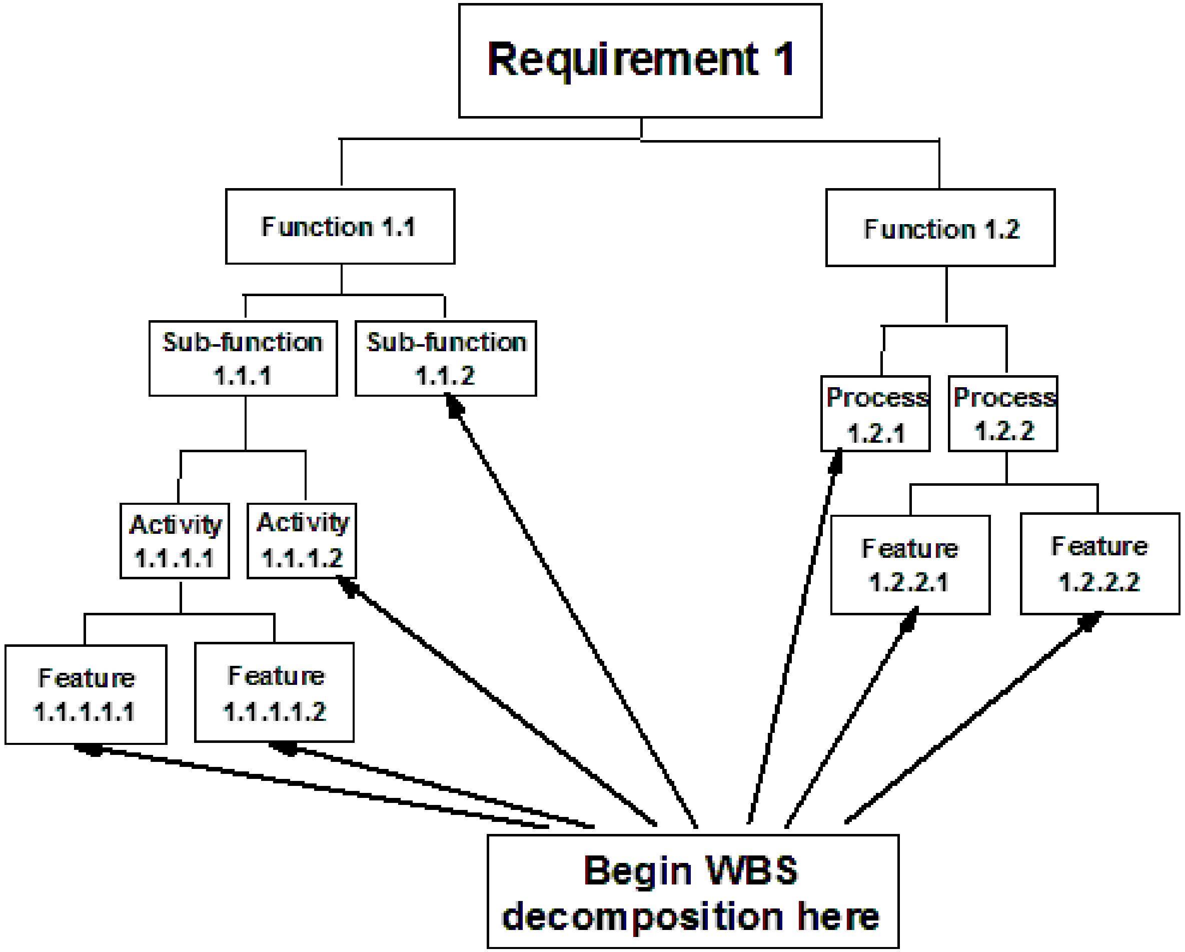
Hierarchical visualization of the WBS



Each activity stands for a decomposition of the WBS.

Figure
05-03

Transition from RBS to WBS – An Example



Uses for the WBS?

- Thought process tool
- Architectural design tool
- Planning tool
- Project status reporting tool

Generating the WBS

- Converting the RBS to the WBS (Figure 5-2)
  - Team Approach
  - Subteam Approach
- Top-Down Approach
  - Team Approach
  - Subteam Approach
- Bottom-Up Approach

Which is best?
When?
Why?

WBS Completion Criteria

- Status and completion are measurable
- The activity is bounded
- The activity has a deliverable
- Time and cost are easily estimated
- Activity duration is within acceptable limits
- Work assignments are independent

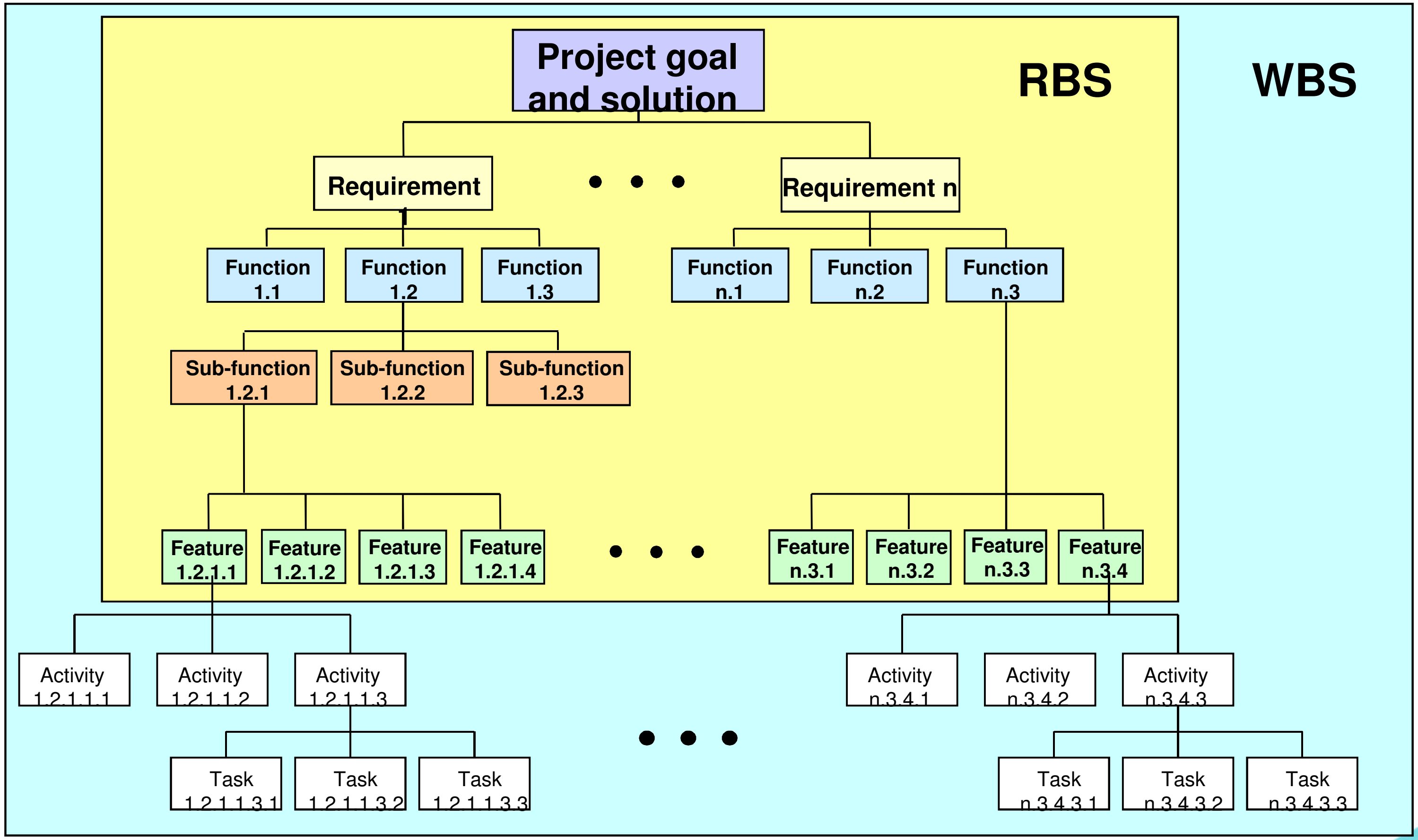
WBS Completion Criteria – The 7th criterion

- The client didn't participate in building the WBS like you expected.
- You have an uncomfortable feeling
- Scope change is likely to be a big part of the project
- Choose a PMLC model that accommodates frequent change

WBS Completion Criteria – Exceptions

- Stopping Before Completion Criteria Are Met
- Decomposing Beyond Completion of the Criteria
  - Short duration projects
  - High-risk activities
  - Large duration variance

RBS is a subset of the WBS



RBS

WBS

Project goal and solution

Requirement 1

• • •

Requirement n

Function 1.1

Function 1.2

Function 1.3

Function n.1

Function n.2

Function n.3

Sub-function 1.2.1

Sub-function 1.2.2

Sub-function 1.2.3

Feature 1.2.1.1

Feature 1.2.1.2

Feature 1.2.1.3

Feature 1.2.1.4

• • •

Feature n.3.1

Feature n.3.2

Feature n.3.3

Feature n.3.4

Activity 1.2.1.1.1

Activity 1.2.1.1.2

Activity 1.2.1.1.3

Activity n.3.4.1

Activity n.3.4.2

Activity n.3.4.3

• • •

Task 1.2.1.1.3.1

Task 1.2.1.1.3.2

Task 1.2.1.1.3.3

Task n.3.4.3.1

Task n.3.4.3.2

Task n.3.4.3.3

Figure 05-04

Approaches to Building the WBS

- Noun-type Approaches
  - Physical components
  - Functional components
- Verb-type Approaches
  - Design-build-test-implement
  - Objectives
- Organizational approaches
  - Geographic
  - Departmental
  - Business process

Which is best?
When?
Why?

Graphical WBS for a House

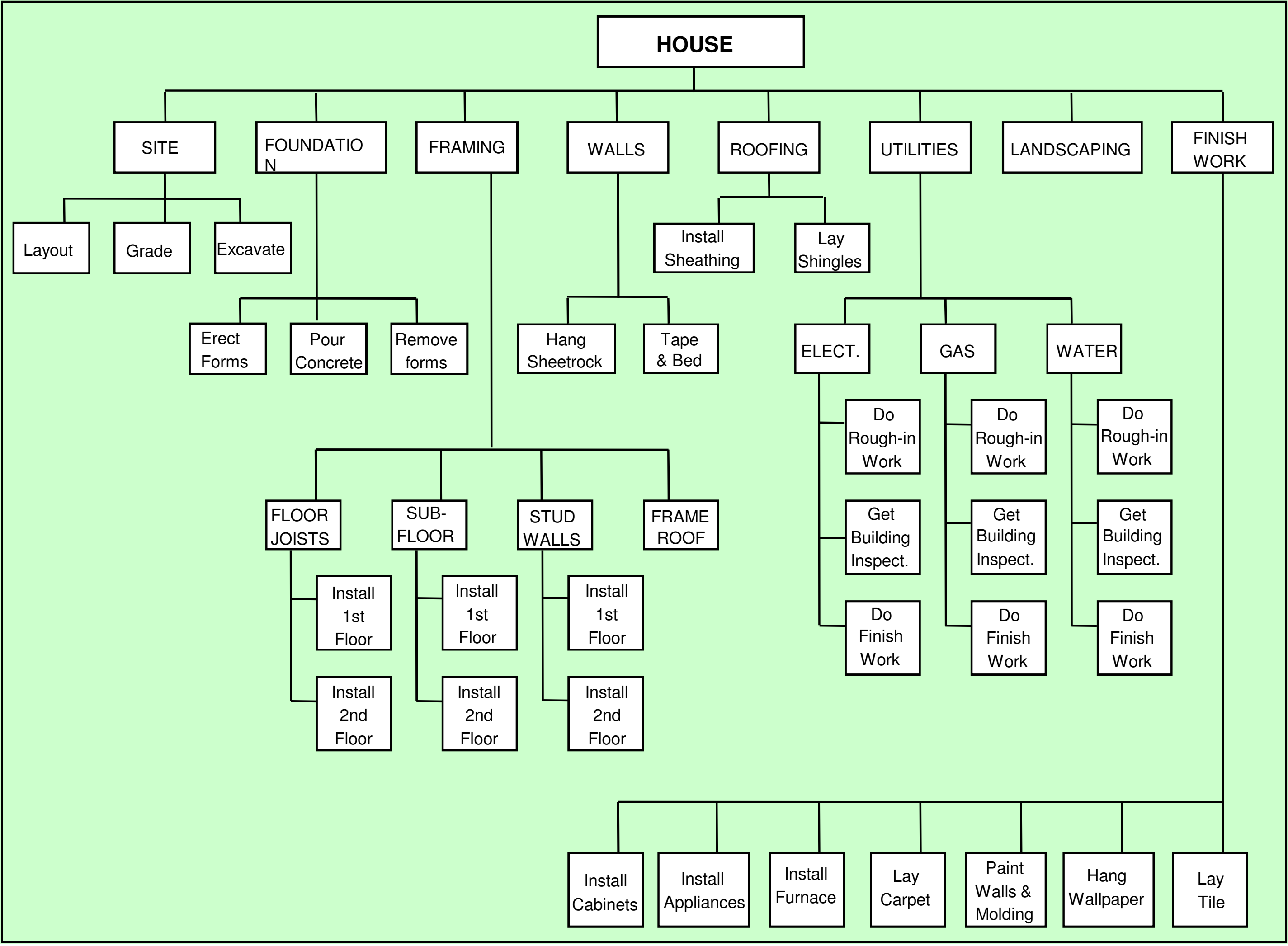


Figure 05-05

Indented Outline WBS for a House

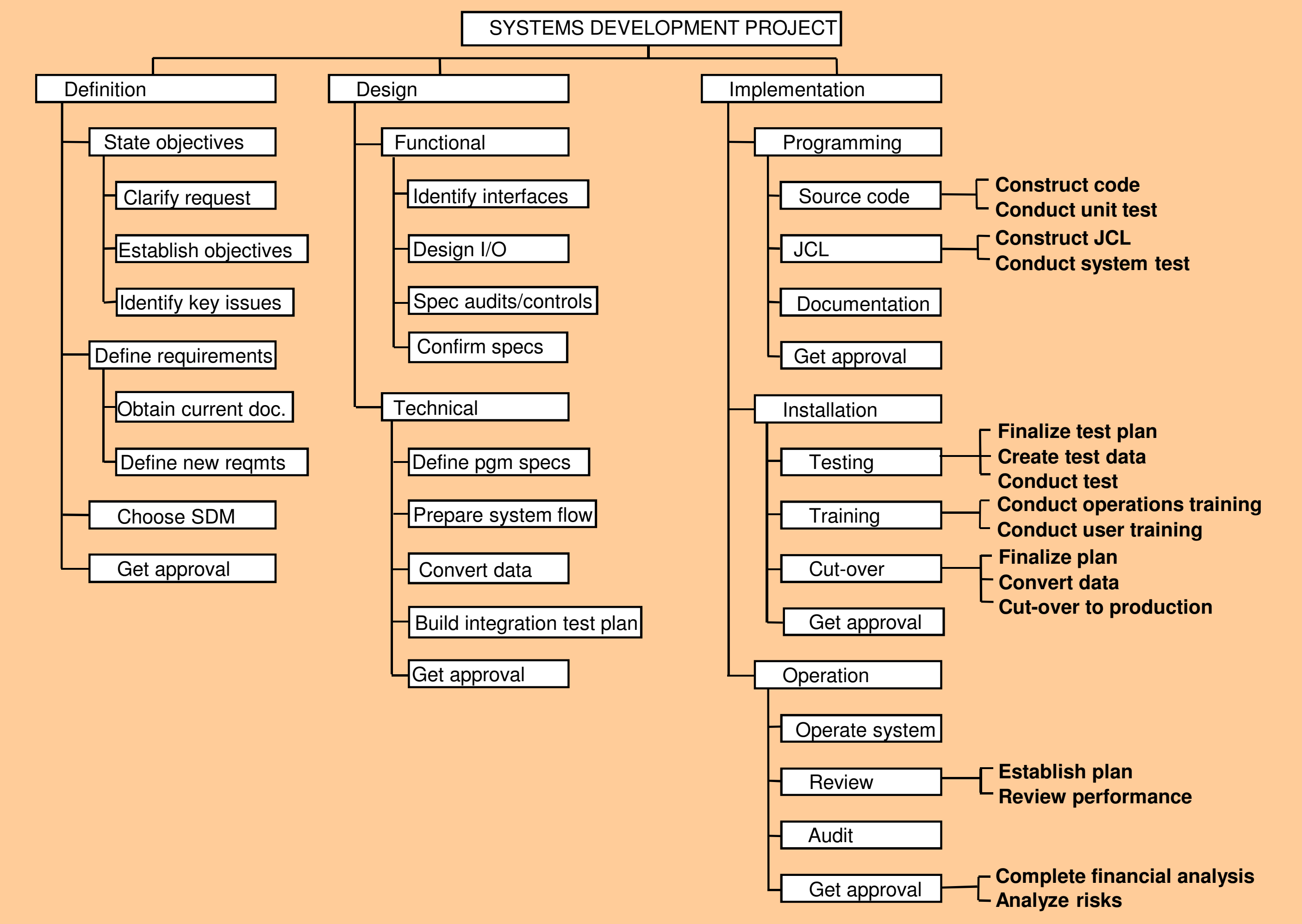
1. SITE PREPARATION
    - 1.1. Layout
    - 1.2. Grading
    - 1.3. Excavation

2. FOUNDATION
    - 2.1. Erect Forms
    - 2.2. Pour Concrete
    - 2.3. Remove Forms

3. FRAMING
    - 3.1. Floor Joists
        - 3.1.1. Install first floor joists
        - 3.1.2. Install second floor joists
    - 3.2. Sub-flooring
        - 3.2.1. Install first floor sub-flooring
        - 3.2.2. Install second floor sub-flooring
    - 3.3. Stud Walls
        - 3.3.1. Erect first floor stud walls
        - 3.3.2. Erect second floor stud walls
    - 3.4. Frame the roof

Figure 05-06

WBS for a Waterfall SDM



- SYSTEMS DEVELOPMENT PROJECT
  - Definition
    - State objectives
      - Clarify request
      - Establish objectives
      - Identify key issues
    - Define requirements
      - Obtain current doc.
      - Define new reqmts
    - Choose SDM
    - Get approval
  - Design
    - Functional
      - Identify interfaces
      - Design I/O
      - Spec audits/controls
      - Confirm specs
    - Technical
      - Define pgm specs
      - Prepare system flow
      - Convert data
      - Build integration test plan
      - Get approval
  - Implementation
    - Programming
      - Source code
        - **Construct code**
        - **Conduct unit test**
      - JCL
        - **Construct JCL**
        - **Conduct system test**
      - Documentation
      - Get approval
    - Installation
      - Testing
        - **Finalize test plan**
        - **Create test data**
        - **Conduct test**
      - Training
        - **Conduct operations training**
        - **Conduct user training**
      - Cut-over
        - **Finalize plan**
        - **Convert data**
        - **Cut-over to production**
      - Get approval
    - Operation
      - Operate system
      - Review
        - **Establish plan**
        - **Review performance**
      - Audit
      - Get approval
        - **Complete financial analysis**
        - **Analyze risks**

Figure 05-07

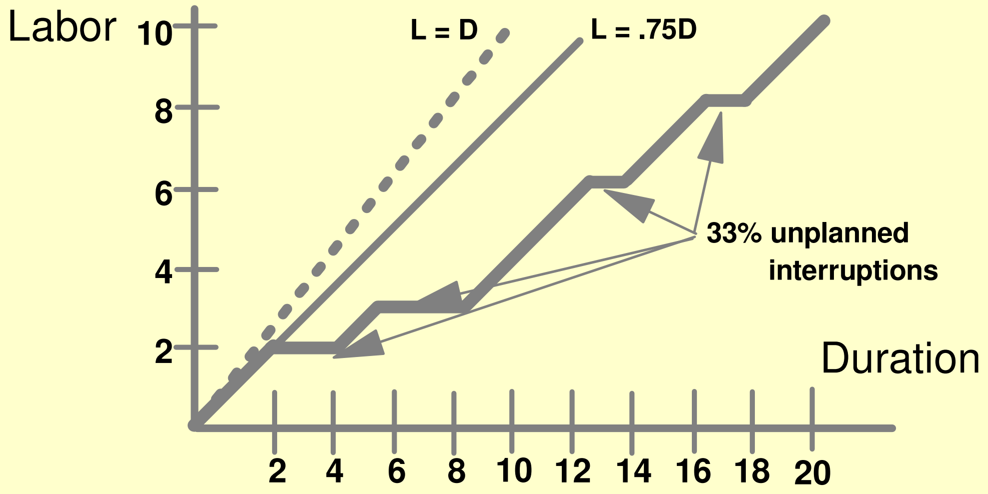
Using WBS Templates

- Saves planning time
- Builds on prior experience
- Standardizes the planning and management of projects using the templates
- Provides a structure for collecting and using estimated/actual duration and cost data
- Focuses process quality improvement efforts

Typical Recurring Projects

- Update an application with new functionality
- Distribute a new release of a software package
- Install a network in a field office
- Update training materials
- Develop new training materials

Elapsed time (duration) versus work time (labor)



MODEL ASSUMPTIONS

* Individuals work at 75 percent efficiency rate.

* Unplanned interruptions account for 33 percent of clock time.

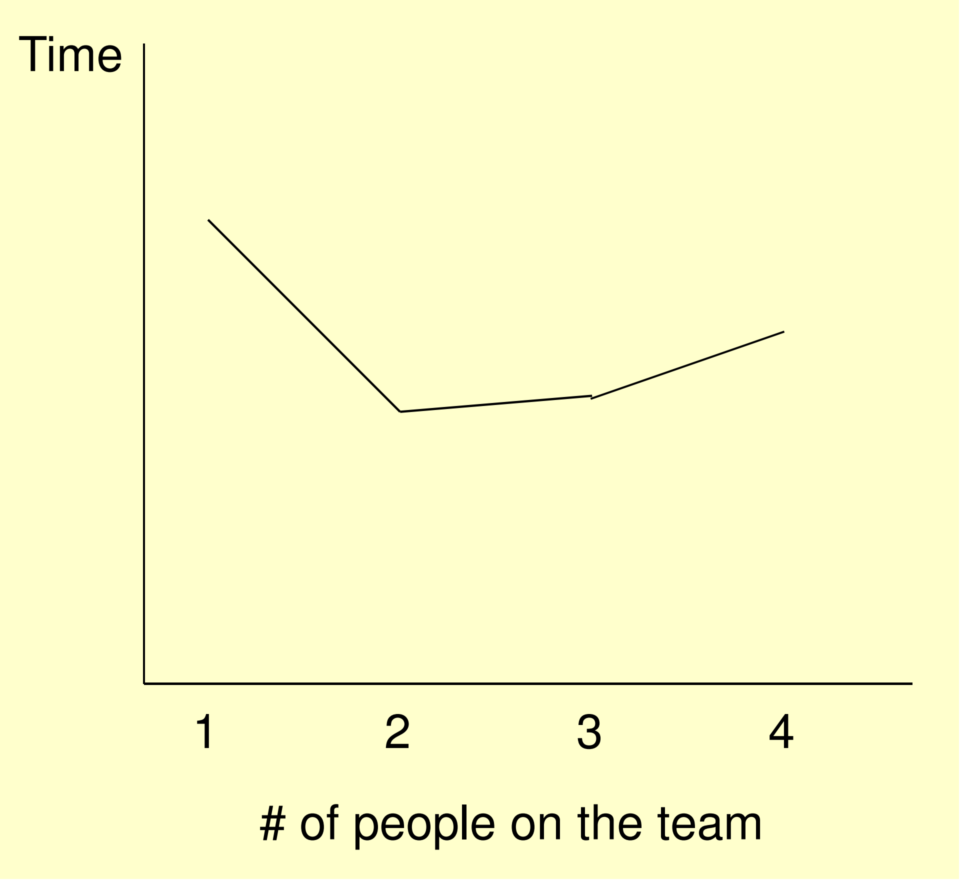
Figure 05-08

Should I Estimate Task Duration or Task Labor?

- Estimate duration to build the schedule and determine when the project will be completed
- Estimate labor when you have to contain expenses within a budget

Resource Loading vs. Task Duration

1. Pick up the chair
2. Carry it to the door
3. Set the chair down
4. Open the door
5. Hold the door open with your foot as you pick up the chair
6. Carry the chair out the door
7. Set the chair in the hallway



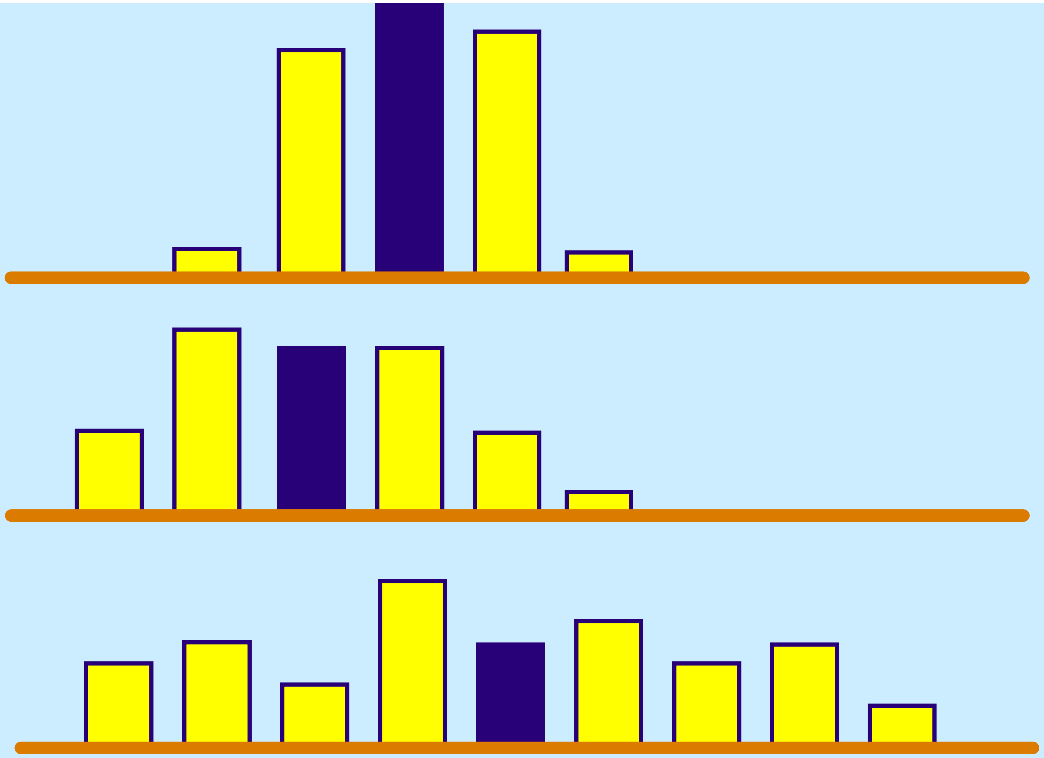
Causes of Variation in Duration

- Varying skill levels
- Unexpected events
- Efficiency of work time
- Mistakes and misunderstandings
- Variation within the capability of the system
- Common cause variation

Six Methods for Estimating Task Duration

- Extrapolating based on similarity to other activities
- Studying historical data
- Seeking expert advice
- Applying the Delphi Technique (Fig 5-9)
- Applying the Three-point technique (Fig 5-10)
- Applying the Wide-band Delphi technique

The Delphi Technique

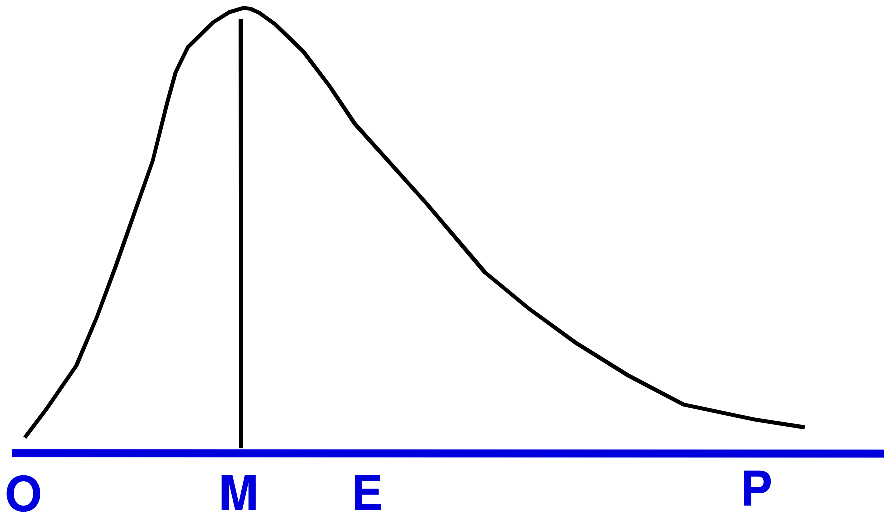


Third Pass

Second Pass

First Pass

The Three-Point Method

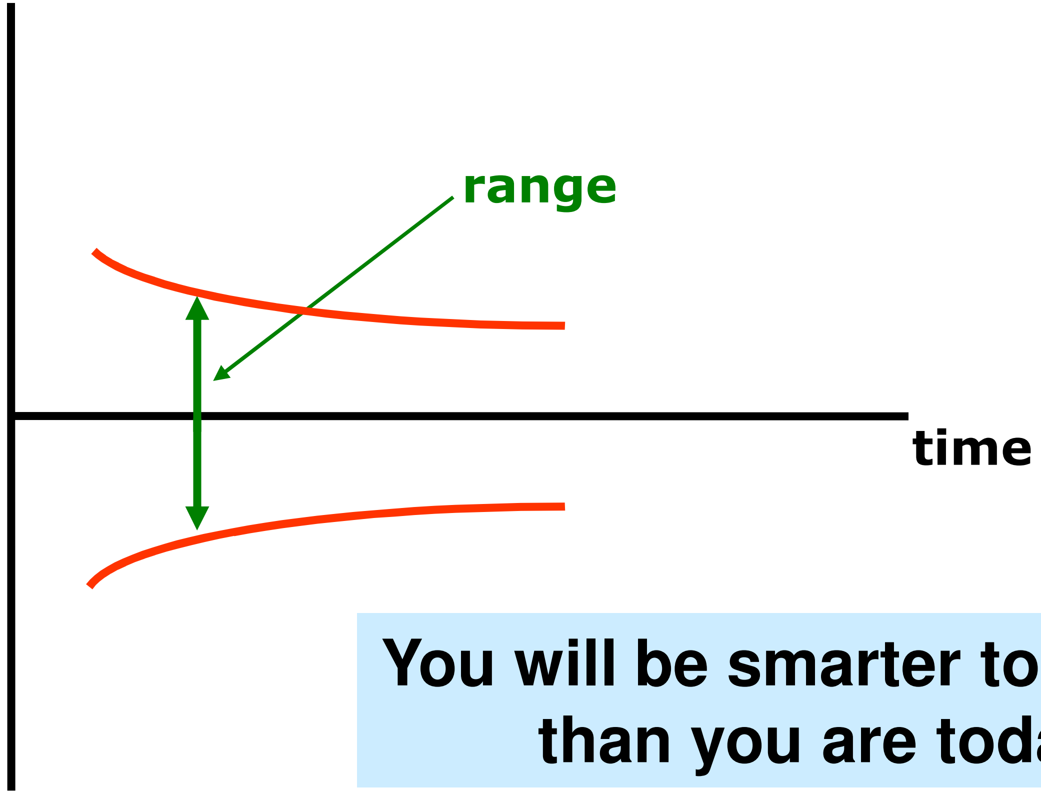


O: Optimistic
P: Pessimistic
M: Most Likely

$$E = \frac{O + 4M + P}{6}$$

Figure 05-10

Estimates Have a Life Cycle Too



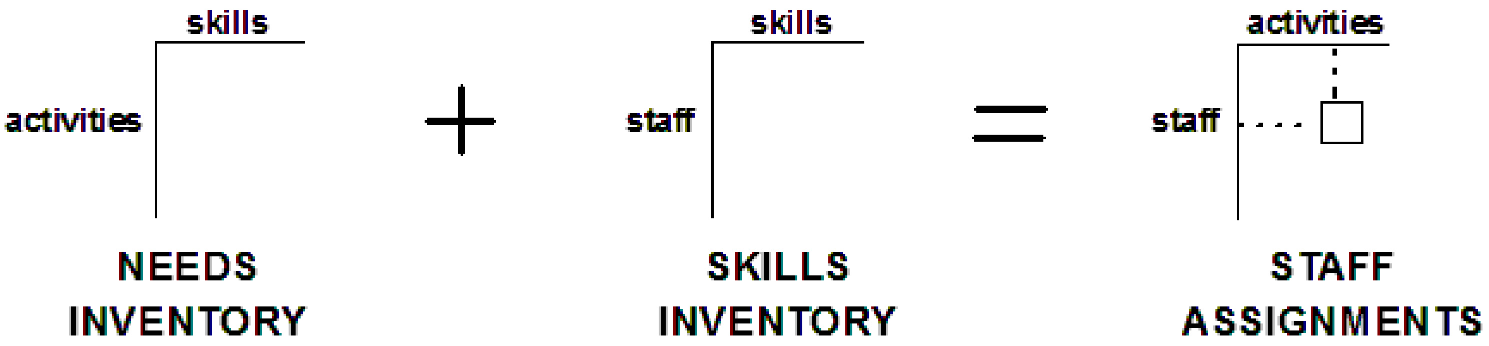
You will be smarter tomorrow than you are today.

Figure 05-11

Estimating Resource Requirements

- People
- Facilities
- Equipment
- Money
- Materials

Assigning Staff to Activities



skills
activities

NEEDS INVENTORY

+

skills
staff

SKILLS INVENTORY

=

activities
staff

STAFF ASSIGNMENTS

Figure 05-12

Resource Breakdown Structure

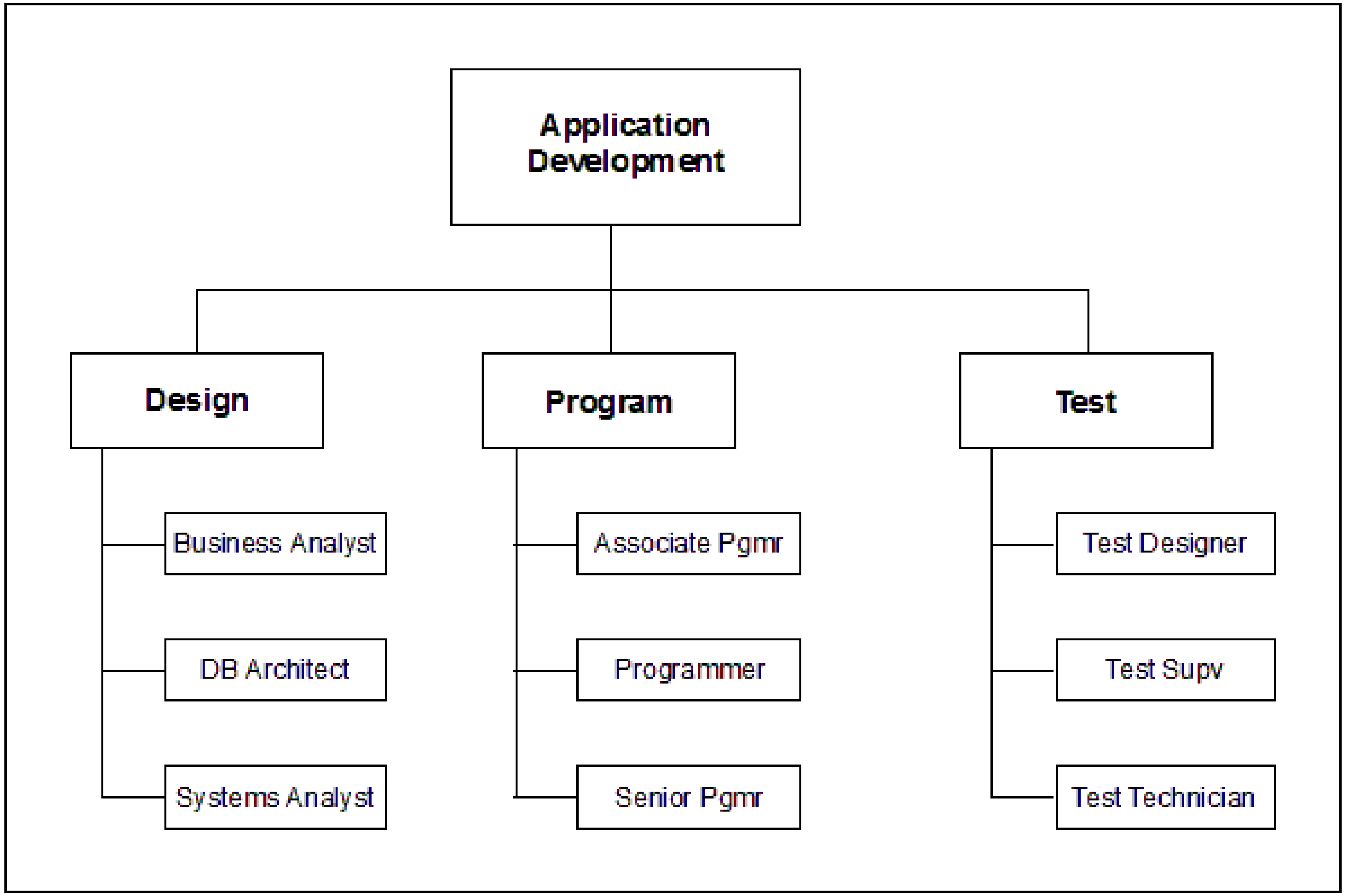
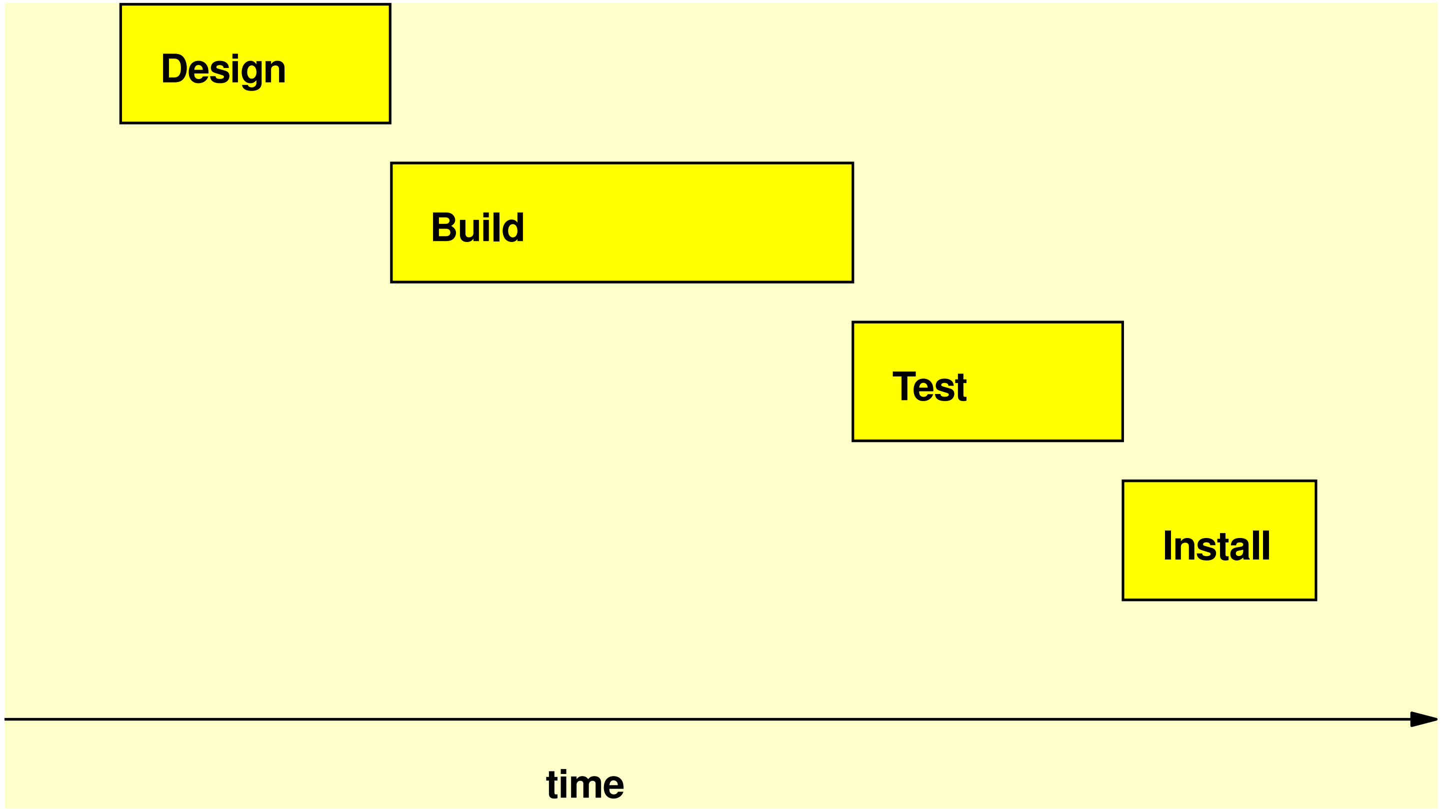


Figure 05-13

Estimating Cost

- Order of magnitude estimate
- Budget estimate
- Definitive estimate
- Cost Budgeting
- Cost Control
  - Weekly reports
  - Baseline versus actual

Network-based Scheduling – Gantt Charts



Network-based Scheduling – Task on the Arrow

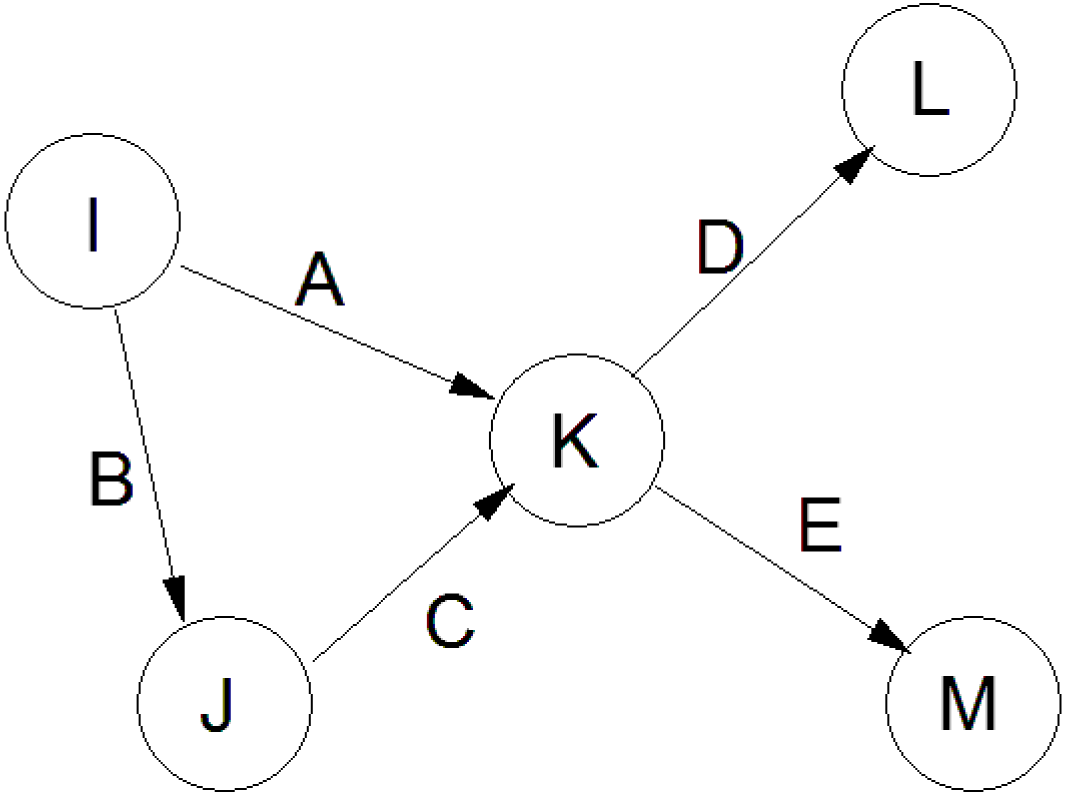


Figure 05-14

Network-based Scheduling – Task on the node format

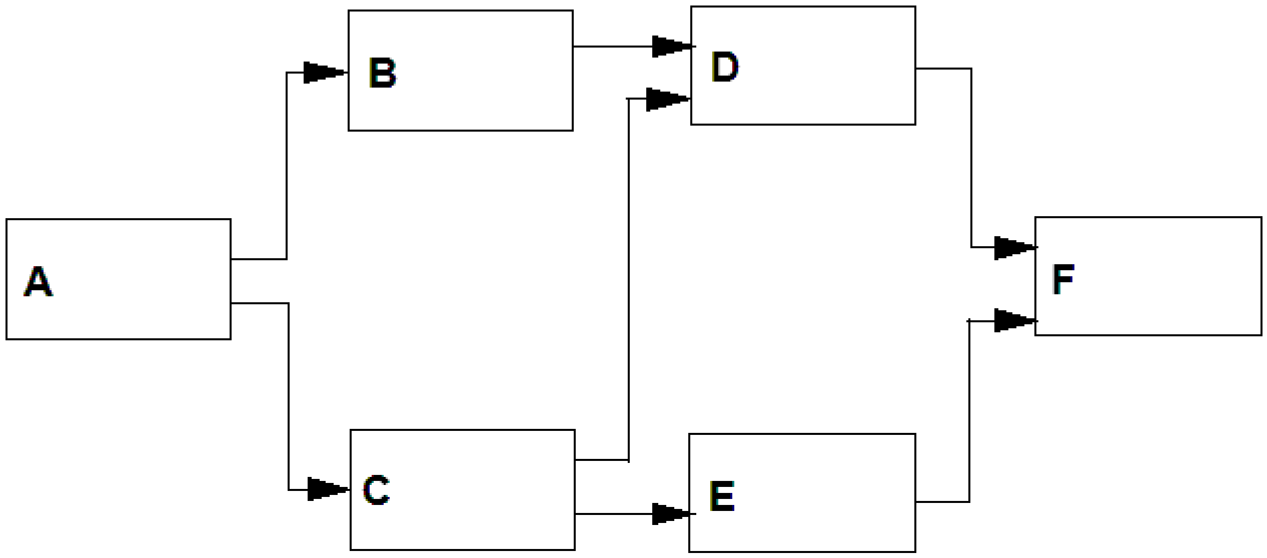


Figure 05-15

Task Node

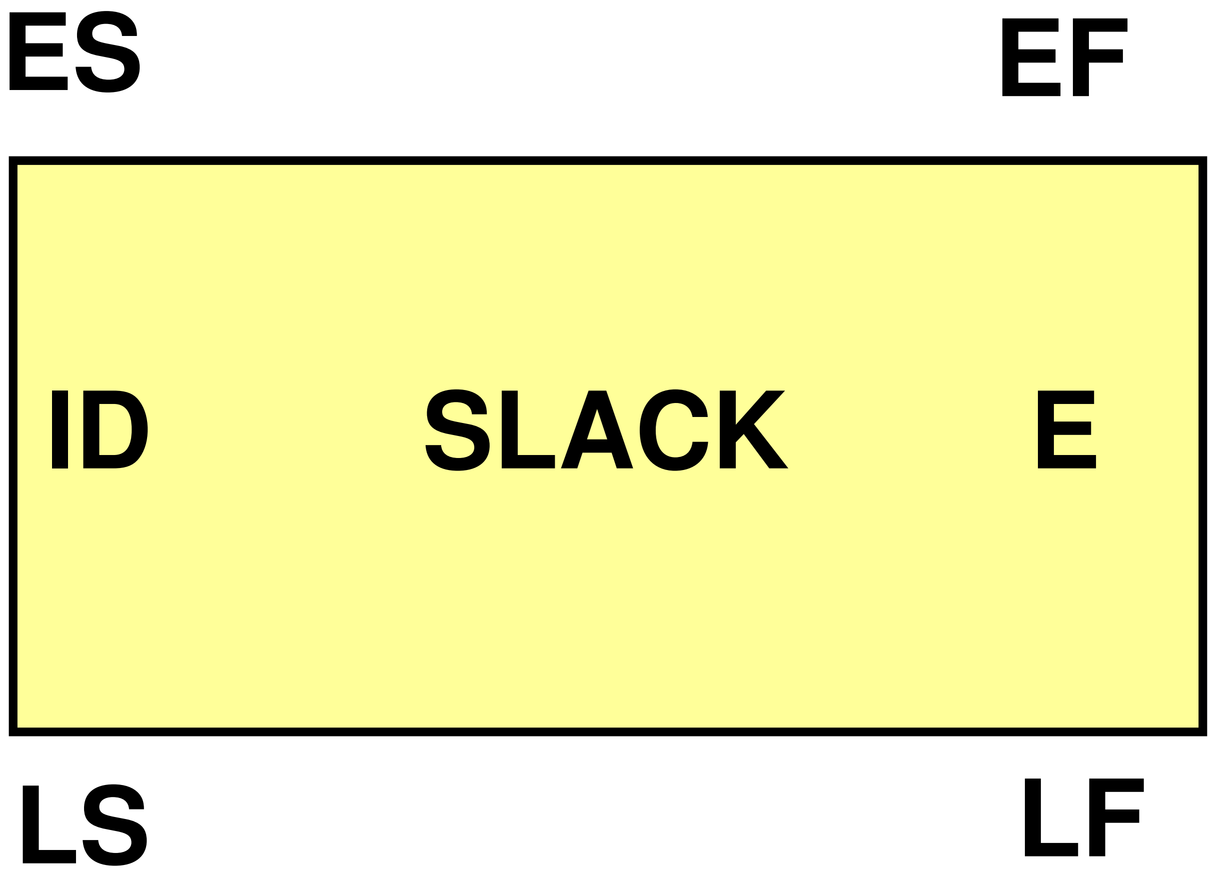
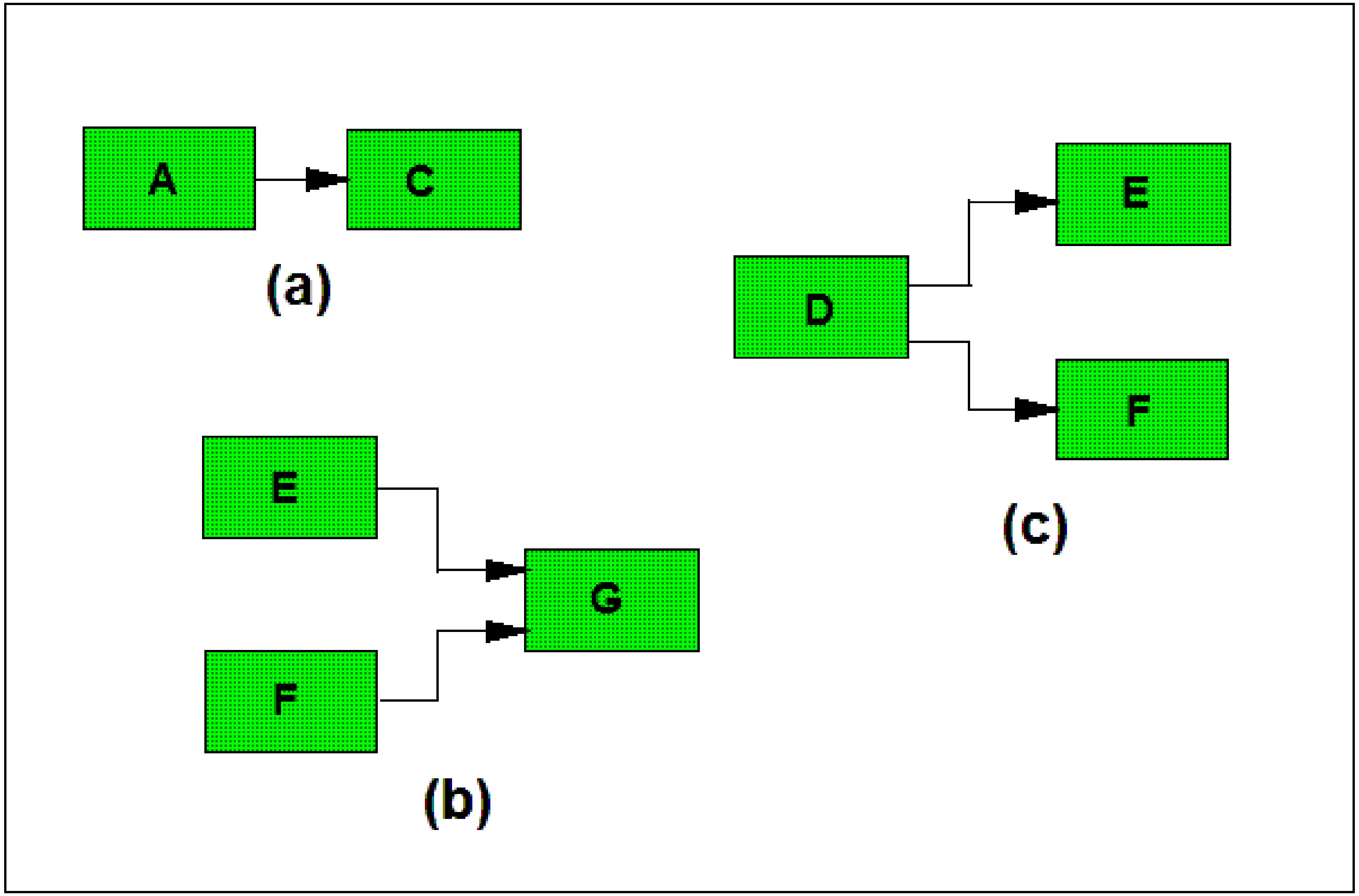
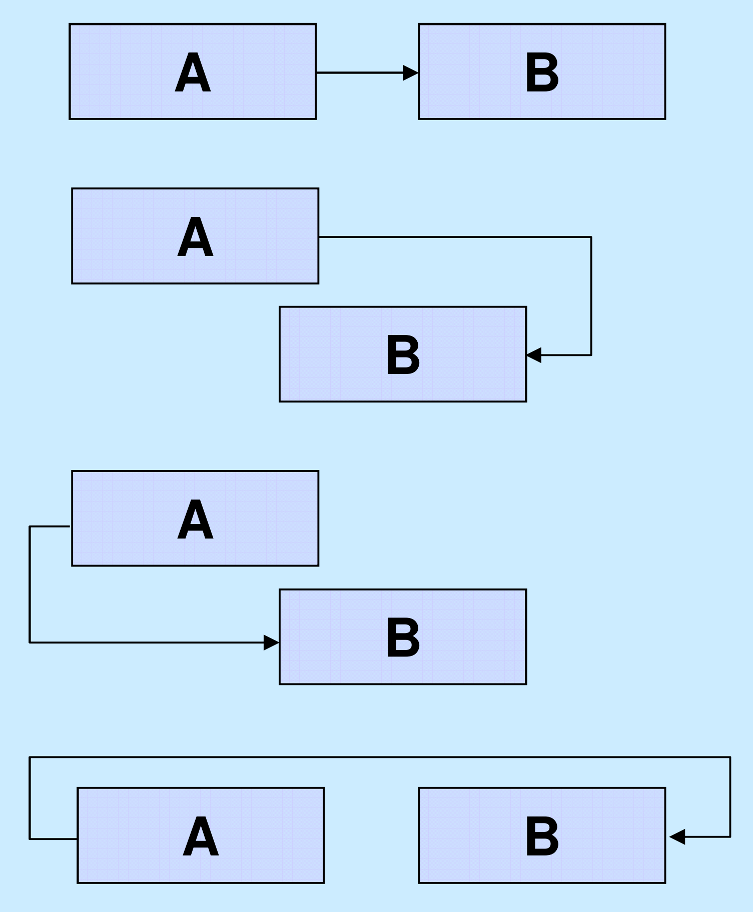


Figure 05-16

Diagramming Conventions



Dependency Relationships



FS: When A finishes, B may start

FF: When A finishes, B may finish

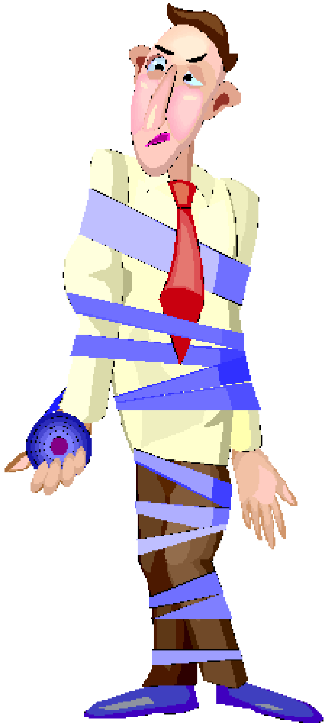
SS: When A starts, B may start

SF: When A starts, B may finish

Figure 05-18

Dependency Constraints

- Technical constraints
  - Discretionary constraints
  - Best practice constraints
  - Logical constraints
  - Unique requirements constraints
- Management constraints
- Inter-project constraints
- Date constraints
  - No earlier than
  - No later than
  - On this date
- Lag variables



Paths Through the Network

- The Forward Pass – Early Schedule
  - Left to right (start to finish)
  - Determines Early Start and Early Finish
  - ES + duration – 1 = EF

- Backward Pass – Late Schedule
  - Right to left (finish to start)
  - Determines Late Start and Late Finish
  - LF - duration + 1 = LS

Forward Pass Calculations – Early Schedule

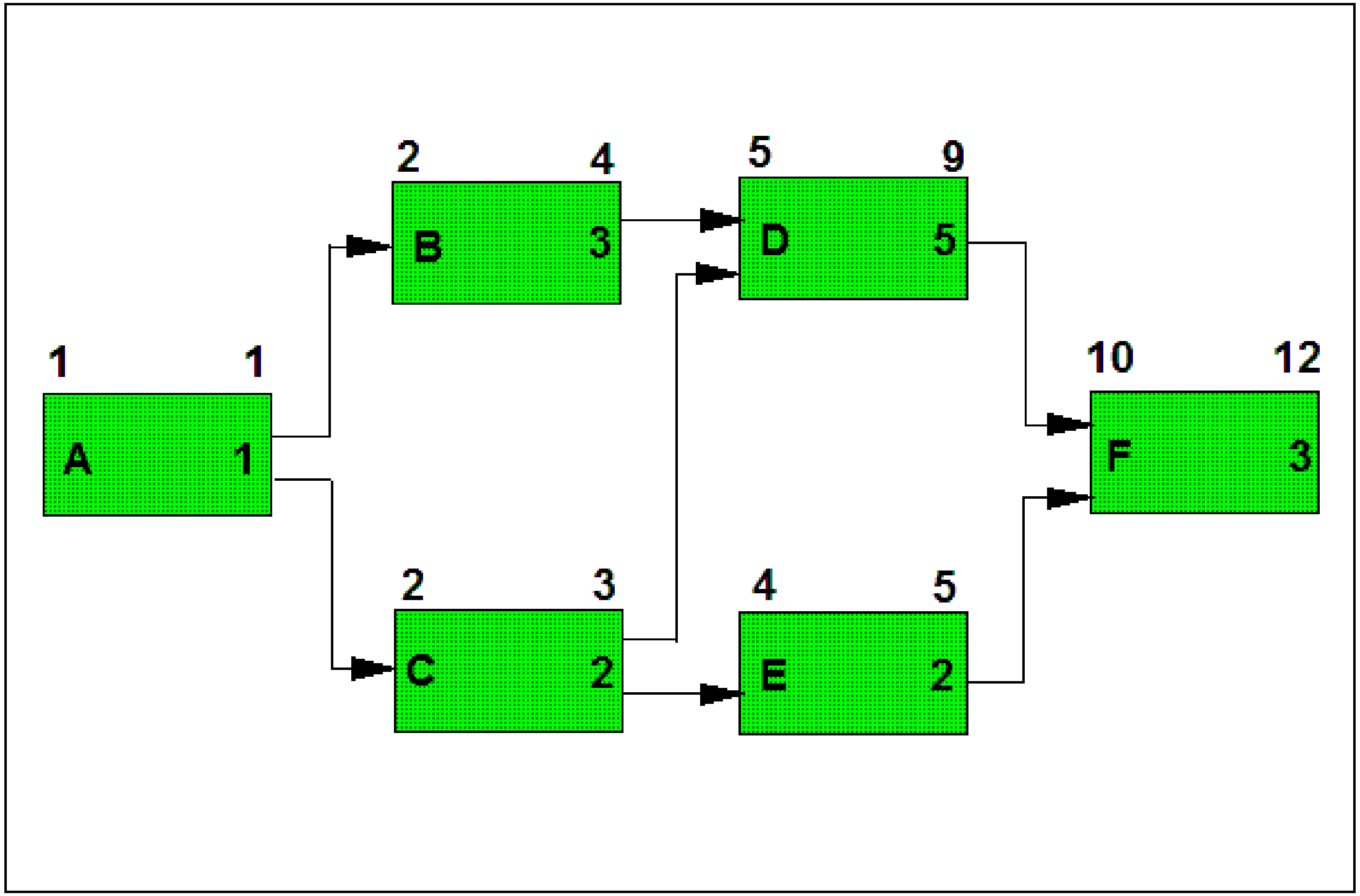


Figure 05-19

Backward Pass Calculations – Late Schedule

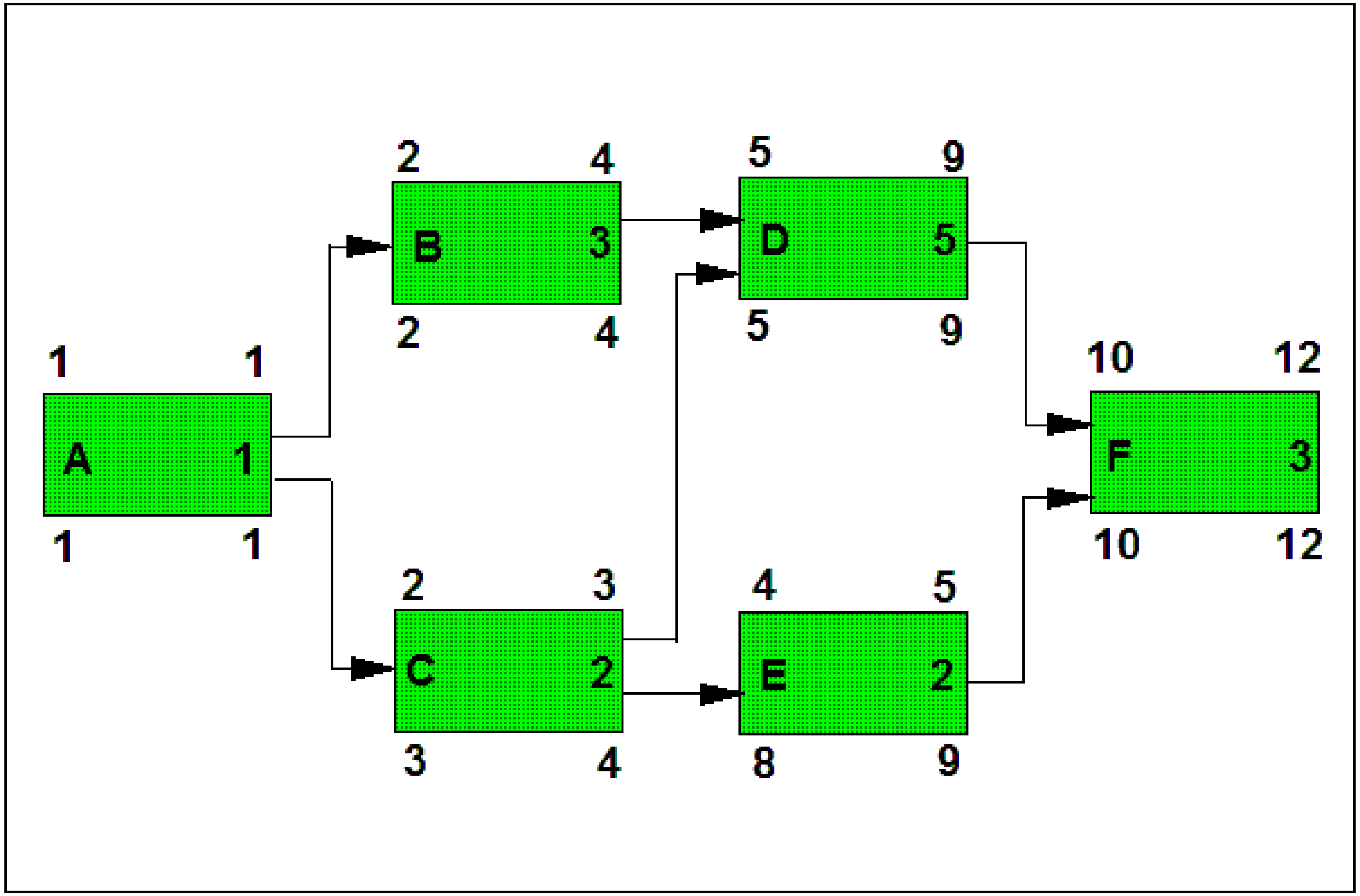


Figure 05-20

Critical Path

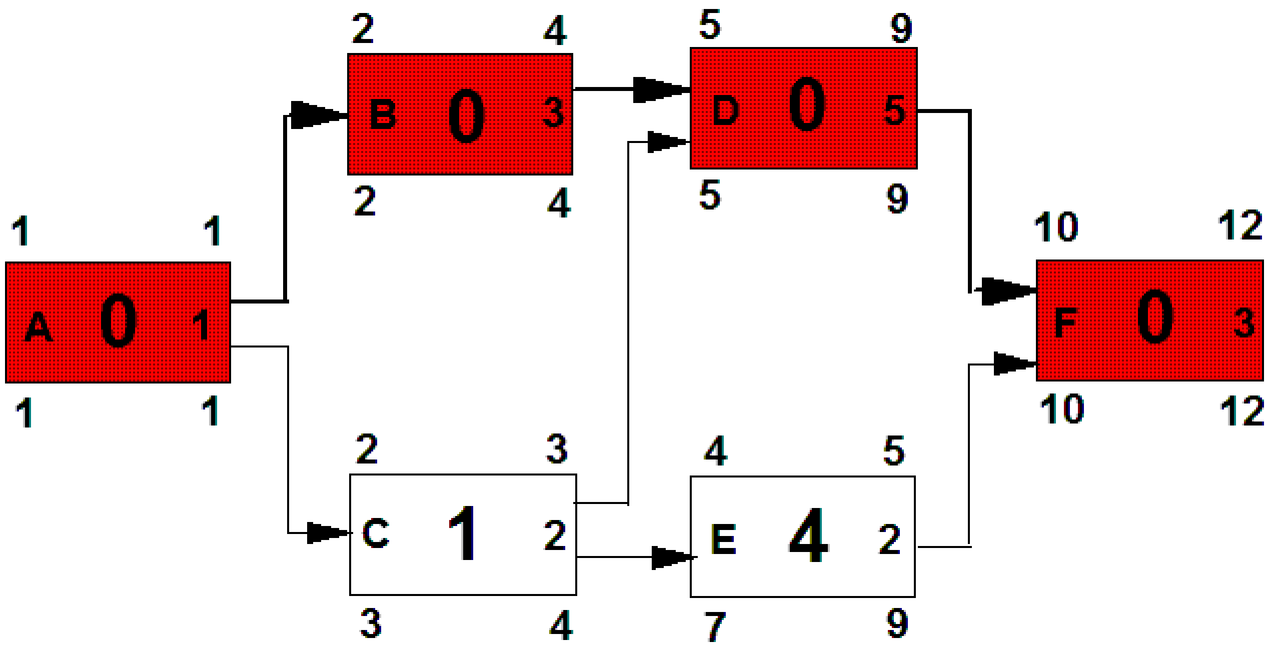


Figure 05-21

Early Start to Late Finish Window

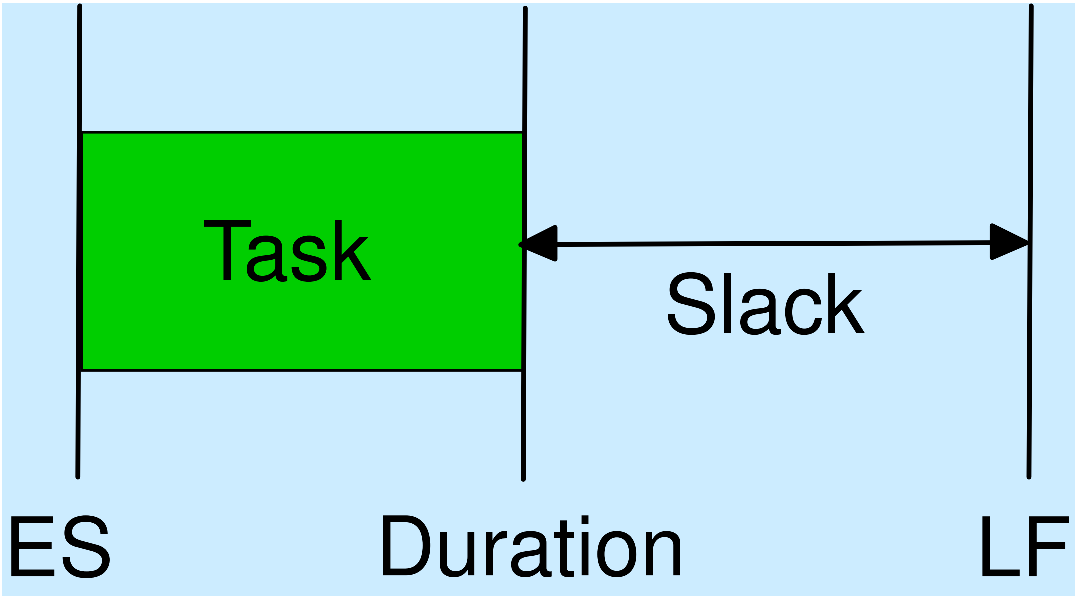
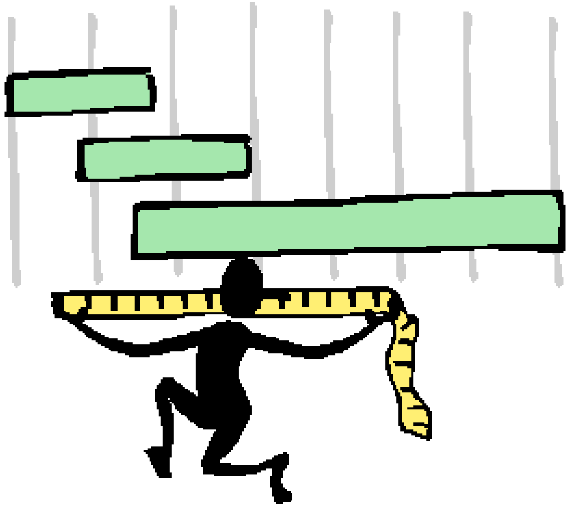


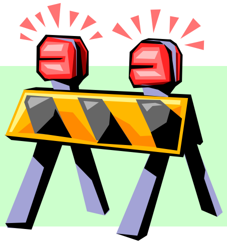
Figure 05-22

Slack Time

- Total Slack
  - Time that a task can be delayed without impacting the early schedule of the project.



- Free Slack
  - Time a task can be delayed without impacting the early schedule of its successor tasks.



Do Not Plan to Use Slack to Bail Out the Project!

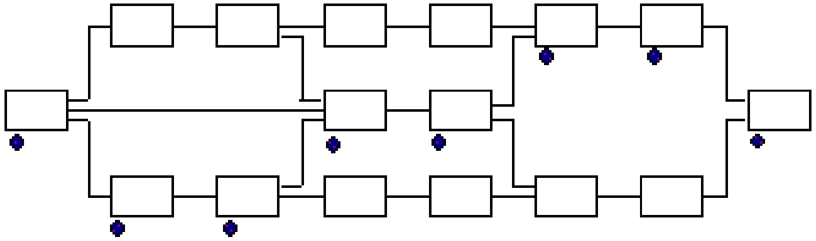
Building the Initial Dependency Diagram

1. Enter task name and duration into software tool
2. Print PERT Diagram
3. Cut out each task node and affix to a Sticky Note
4. Write task ID # on Post-It Note
5. Place Sticky Notes on right side of whiteboard
6. Position start node on left side of whiteboard
7. Move all tasks with no predecessor to left side and connect to start node
8. Move all tasks on the right side with predecessors on the left side to the left side and connect with single line
9. Continue until all task nodes have been moved to left side

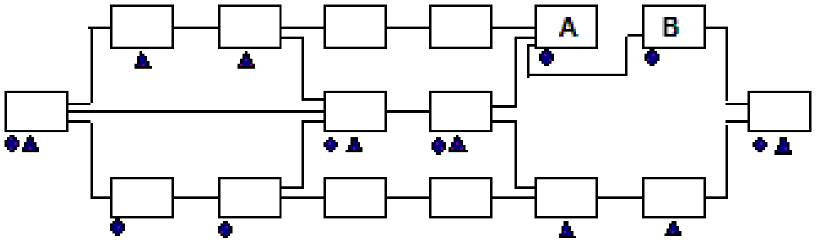
Schedule Compression Techniques

- Replace FS with SS dependencies
- Replace a team member with a more skilled person
- Add resources
  - From non-critical path tasks to critical path tasks
  - From other projects
  - To where
    - critical path tasks
    - high-risk tasks
    - tasks with large duration variances

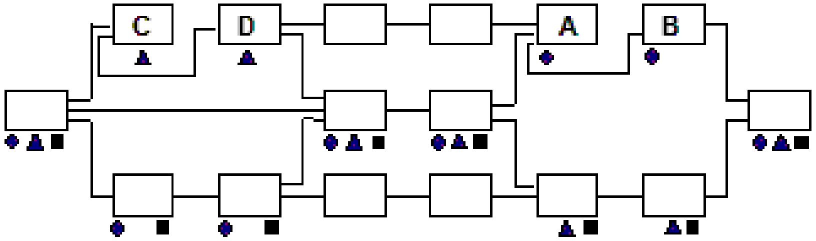
Schedule Compression Iterations



Original critical path



Critical path after changing AB from FS to SS

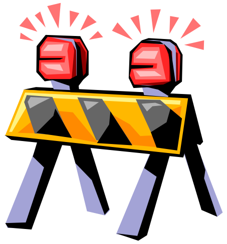


Critical path after changing CD from FS to SS

Figure 05-23

Schedule Compression

Schedule compression doesn't come free.



What is the impact on the project due to schedule compression?

Management Reserve

- DO NOT PAD ACTIVITY DURATION
- A percentage (5 – 10) of total project work hours
- The last activity in the project
- A schedule contingency for the unexpected
- Make it visible and manage it

Contents of the Project Proposal

- Executive Summary
- Background
- Objective
- Overview of the approach to be taken
- Detailed statement of work
- Time and cost summary
- Appendices

Gaining Approval to Launch the Project

- The cost/benefit is not in your favor
- The risks of failure are too high
- The total project cost exceeds available funding
- There are other projects competing for the same resources

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch06: How to Launch a TPM Project

Presented by
(facilitator name)

Summary of Chapter 6

- Using tools, templates, and processes to launch a project
- Recruiting the project team
- Conducting the project kick-off meeting
- Establishing team operating rules
- Managing scope changes
- Managing team communications
- Assigning resources
- Resource-leveling strategies
- Finalizing the project schedule
- Writing work packages

Tools, Templates & Processes Used to Launch a Project

- Recruiting the Project Team
- Team Operating Rules
    - Problem Solving
    - Decision Making
    - Conflict Resolution
    - Consensus Building
    - Brainstorming
    - Team Meetings
- Scope Change Management Process
- Communications Management Planning
- Work Packages
- Resource assignment
- Finalize the project schedule

What is a Project Team?

- A project team is a group of professionals committed to achieving common objectives, who work well together and who relate directly and openly with one another to get things done.
- Project team membership
  - Co-Project manager – developer (chosen before Scoping)
  - Co-Project manager – client (chosen before Scoping)
  - Core team (chosen before Planning)
  - Developer team (chosen before Launching)
  - Client team (chosen before Launching)
  - Contracted team (chosen after Launching)

Characteristics of the Core Team

- Commitment
- Shared responsibility
- Flexibility
- Task-oriented
- Ability to work within schedules and constraints
- Willingness for trust and mutual support
- Team-oriented
- Open-minded
- Ability to work across structure and authorities
- Ability to use project management tools

Client Team Members

- Must understand their business unit processes
- Must be able to make decisions and commitments for their business unit

Contract Team Members - Implications

- Little variance in times they are available
- Know how their tasks relate to the project
- Commitment can be a problem
- Quality of work may be poor
- May require more supervision than core team

Balancing a Team

- Assimilating
- Diverging
- Accommodating
- Converging

What Makes a Project Team Effective?

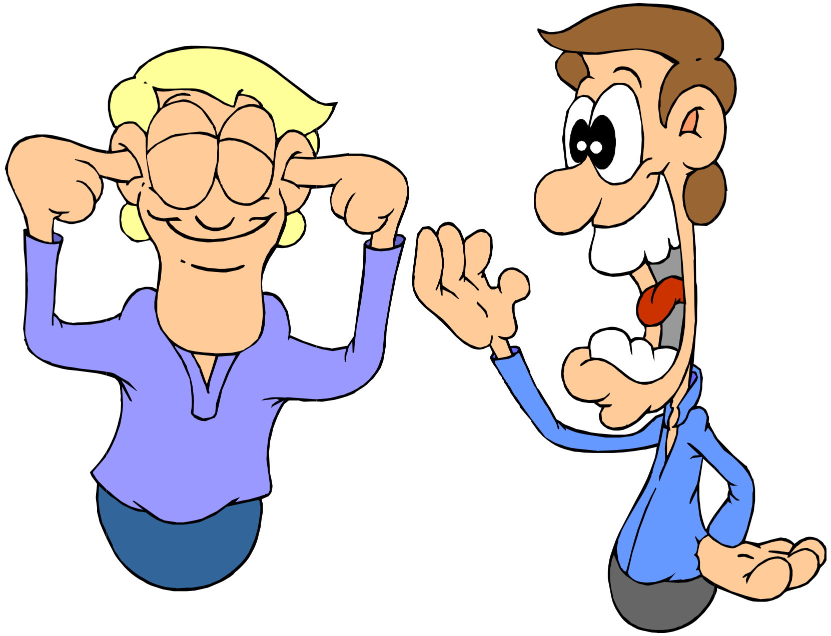
- Quality
- Flexibility
- Coordination & Cooperation
- Member satisfaction
- Member development
- Possesses needed skills and competencies
- Productivity

Where Project Teams Can Improve

- Work methods and procedures
- Knows appropriate technology
- Associate attraction and retention
- Staffing flexibility
- Service and product quality use
- Rate of output
- Decision making
- Reduced staff support level
- Reduced supervision

Team Member Responsibilities

- Open communication
- Good listening skills
- Shared goals
- Positive outlook
- Creativity
- Respect for others
- Growth and learning



Kick-Off Meeting Agenda

- Introductions
- Sponsor Comments
- Write the Project Definition Statement*
- Establish team operating rules*
  - Problem solving
  - Decision making
  - Conflict resolution
  - Consensus building
  - Brainstrorming
  - Team meetings
- Integrate team member availabilities into schedule*
- Identify and write work packages*

* This working part of the meeting is for the members of project team

Project Definition Statement – Contents

- Expands the POS
  - Project objectives
  - Assumptions, risks and obstacles

Project Definition Statement – Purpose

- As a basis for continued project planning
- To clarify the project for the project team
- As a reference that keeps the team focused in the right direction
- As an orientation for new team members
- As a method for discovery by the team

Delegation: RASCI Matrix

TASKS

	Jack	Bob	Cheryl
Confirm customer approval of scope	R	S	
Choose project team	R	I	A
Plan project	S	R	
Define Budget	C	R	I
Plan Kick-Off Meeting	I		R

R= Responsible, accountable for successful completion

A= Needs to Approve decisions

S= Will provide Support for the “R”

C= Available to Coach and Consult

I= Needs to be kept informed of status

Expanded Variation of the RASCI Matrix

Tasks	Task Lead	Start Date	End Date	Est. End	Pred.	Succ.	CP?	Comments
A	Jack	7/1/11	7/3/11	**7/2/11**	Start	B	Y	
B	Bob	7/5/11	XXXX	**7/13/11**	A	D	Y	
C	Cheryl	7/5/11	7/10/11	**7/13/11**	A	D	N	
D	Harry	7/14/11	7/16/11	**7/14/11**	B C	End	Y	

Establishing Team Operating Rules

- Problem solving
- Decision making
- Conflict resolution
- Consensus building
- Brainstorming
- Team meetings

Five Steps to Solving a Problem

1. Define the problem & the owner
2. Gather relevant data and analyze causes
3. Generate ideas
4. Evaluate and prioritize ideas
5. Develop an action plan

Source: Creative Problem Solving and Opportunity Finding
J. Daniel Couger, 1995

Figure 06-01

Decision Making Is Pervasive

- What has to be done and where? Scope
- Why should it be done? Justification
- How well must it be done? Quality
- When is it required? In what sequence? Schedule
- How much will it cost? Budget/Cost
- What are the uncertainties? Risk
- Who should do the job? Human Resources
- How should people be organized into teams? Communication/ Interpersonal Skills
- How shall we know? Information Dissemination/Communication

Decision Making Styles

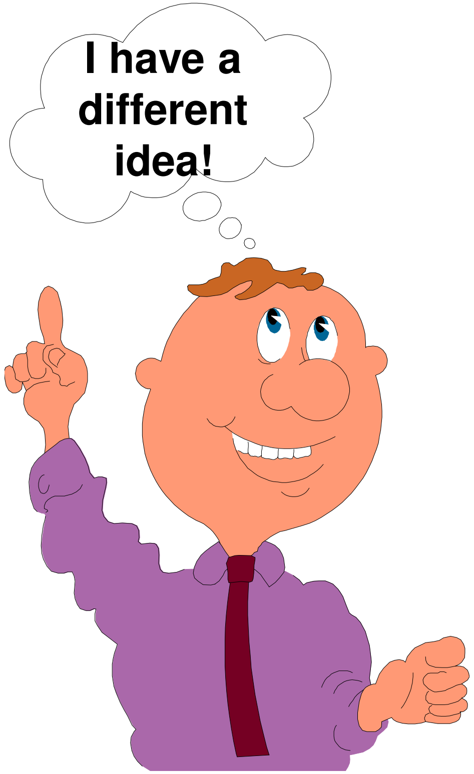
- Directive
- Participative
- Consultative

The Six Phases of the Decision-Making Process

PHASE	DESCRIPTION	LEARNING STYLE
Phase I: Situation	Discovery phase. The team investigates, discusses, clarifies, and defines the situation. It is important fordefinition the team to understand the root causes and evidence that led to the need for a decision.	Assimilator
Phase II: Situation	Continuation of Phase I. Characterized by brain- storming and searching for new ideas and alternatives decision for resolving the situation, which should lead to generation better options for the decision. Above all, the team needs to avoid a rush to judgment.	Diverger
Phase III: Ideas to action	Define the criteria for evaluating the alternative decisions. This involves identifying the advantages and disadvantages of each alternative. Whatever approach is used, the result should be a ranking of alternatives from most desirable to least desirable.	Converger
Phase IV: Decision	Begins once the alternative is chosen. This is the planning phase for the project team. The team action plan determines tasks, resources, and timelines that are required to implement the decision. This phase requires a concerted effort to obtain buy-in from all affected parties.	Converger
Phase V: Decision	Learning opportunity for the project team. The team identifies what did and did not work, as well as areas evaluation in which it can improve and how to do so. The value planning of this discussion lies in the team's willingness to be honest and straightforward with one another.	Accommodator
Phase VI: Evaluation	Focuses on the quality of results. The team evaluates the situation: Was the situation improved satisfactorily, of outcome or will another round be required? Was the situation and process defined correctly, or is revision required? Did the process work as expected, or will it need adjustment for the next attempt?	Assimilator

Table 06-01

Conflict Resolution

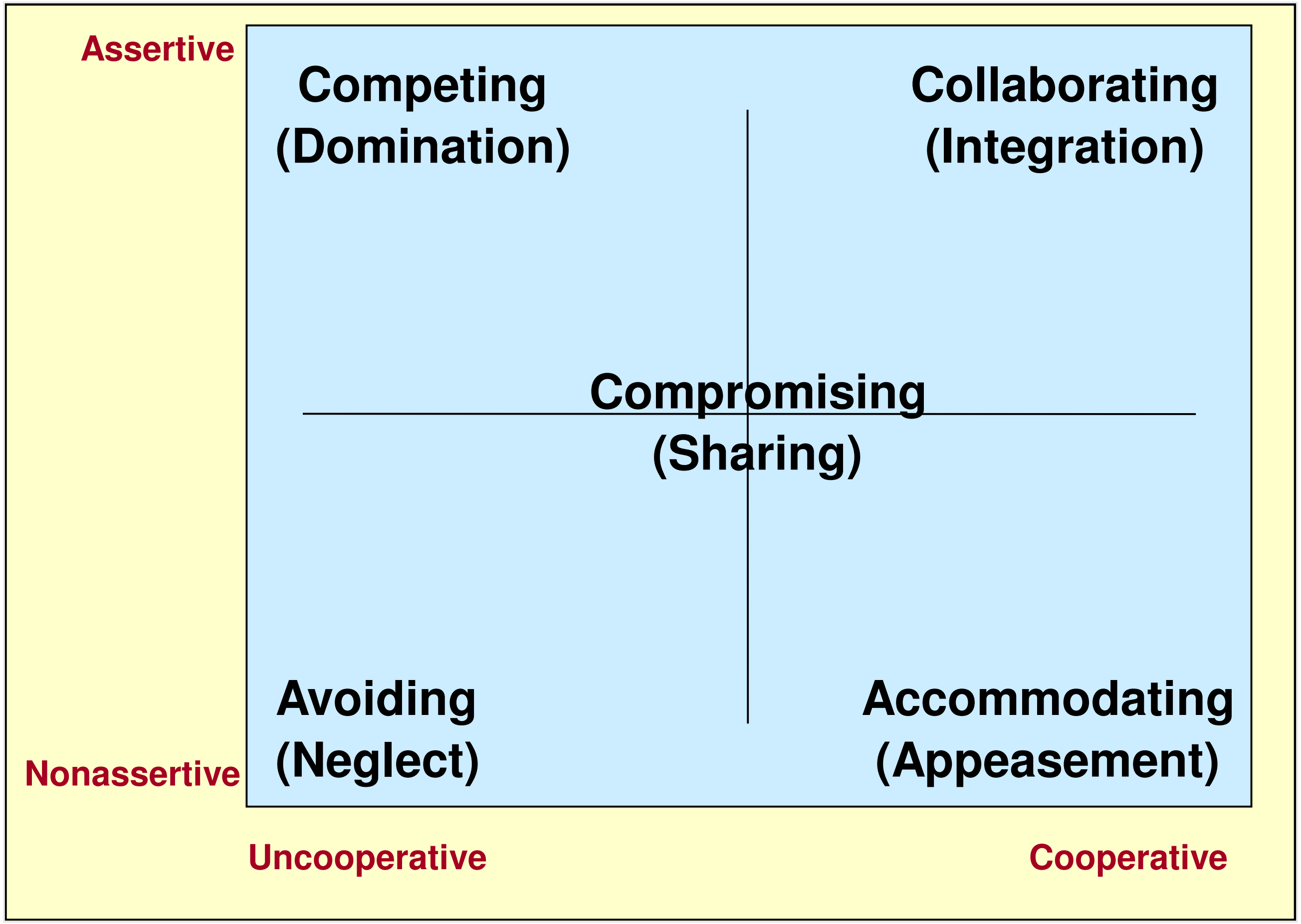

I have a different idea!

Conflict is good.

I'll win at any cost!

Conflict is bad.

Conflict Resolution



Consensus Building

Be careful--a consensus decision that equally satisfies all parties may be a bad decision after all.

Brainstorming Method

- Assemble individuals with knowledge of problem area
- Throw any/all ideas on the table
- Continue until no new ideas are uncovered
- Discuss items on the list
- Solutions begin to emerge
- Test each idea with an open mind

Look for solutions that no individual could identify but the group may identify.

Team Meetings

- What is your purpose?
- How often? How long?
- Who should attend?
- Do we need an agenda?
- Are there minutes? Who takes them? Who gets them?

Guidelines for Managing Meetings

- Before the Meeting
  - Is the meeting necessary?
  - Determine the purpose of the meeting
  - Set the ground rules for the discussion
  - Determine who really needs to be present and only invite those people
  - Make notes and rehearse your presentation
  - Start and end the meeting on time

Guidelines for Managing Meetings

- During the Meeting
  - Specify a time limit and stick to it
  - Identifying the specific objectives
  - Gather input from the participants
  - Keep things moving
  - Use visual aids
  - Periodically summarize the results of the discussion in terms of consensus achieved or disagreements still in progress
  - Assign action items to team members

Guidelines for Managing Meetings

- After the Meeting
  - Time, place, and instructions for the next meeting
  - Time and place of the meeting and list of attendees with their project role
  - Agenda items discussed
  - Decisions reached or held for further studies
  - Action items and persons responsible for follow up and reporting back to the team at the next meeting

Project Meetings

- Daily status meetings
- Problem resolution meetings
- Project review meetings

Frequency
Length
Purpose
Team Room

Daily Status Meetings

- 15 minutes
- Everyone stands
- Only reporting on tasks open for work and not yet done
- Status
  - I’m on plan
  - I am x hours behind schedule but have a plan to be caught up by this time tomorrow
  - I am x hours behind plan and need help
  - I am x hours ahead of plan and available to help

Problem Resolution Meeting Agenda

- Only attended by those involved in the problem
- Who owns the problem?
- What is the resolution?
- When will it be completed?

Project Review Meetings

- Held at project milestone events
- Project review panel
- Formal presentation of project performance to date

Team War Room

- Physical layout
- Variations
- Operational uses

Typical Scope Change Management Process

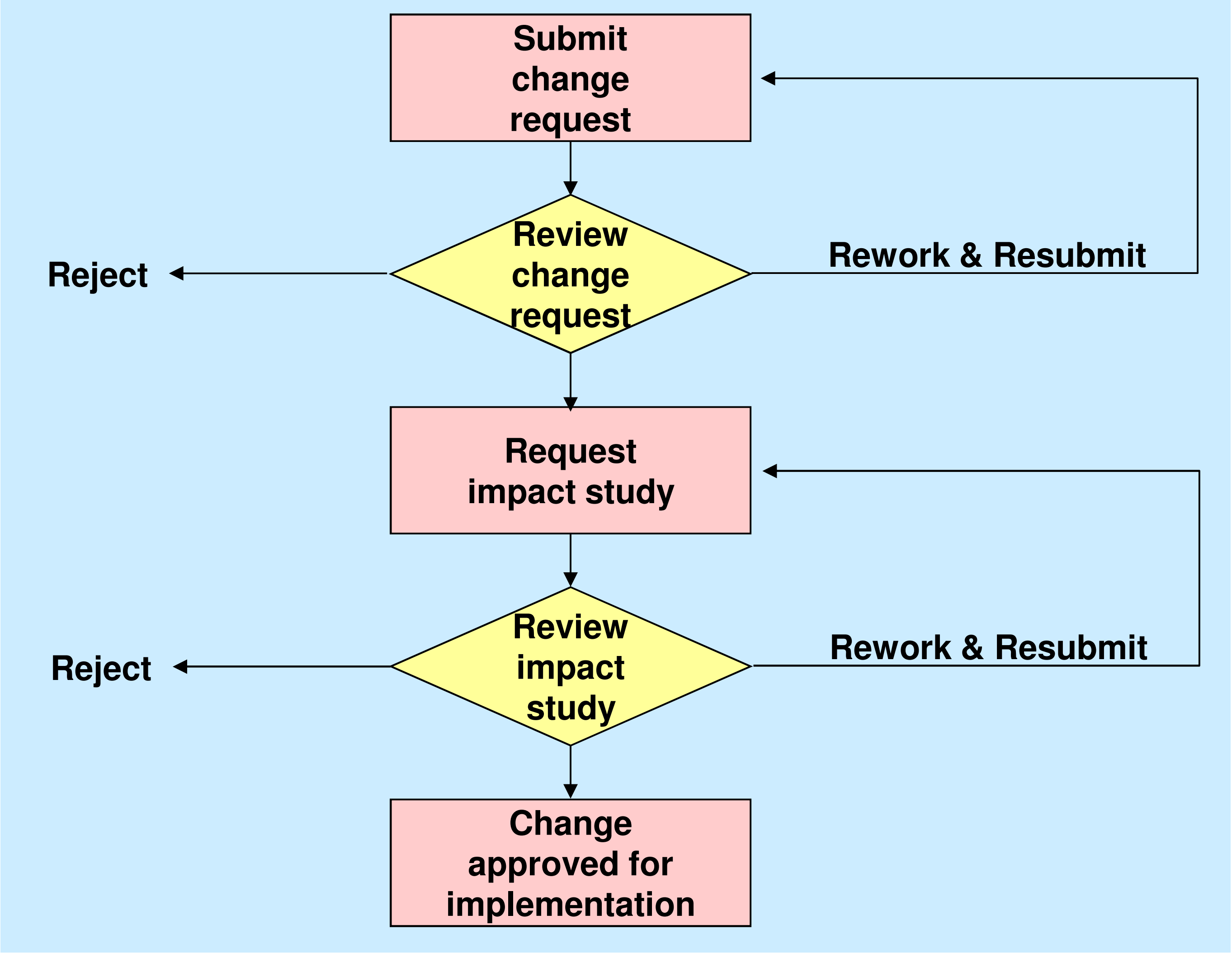
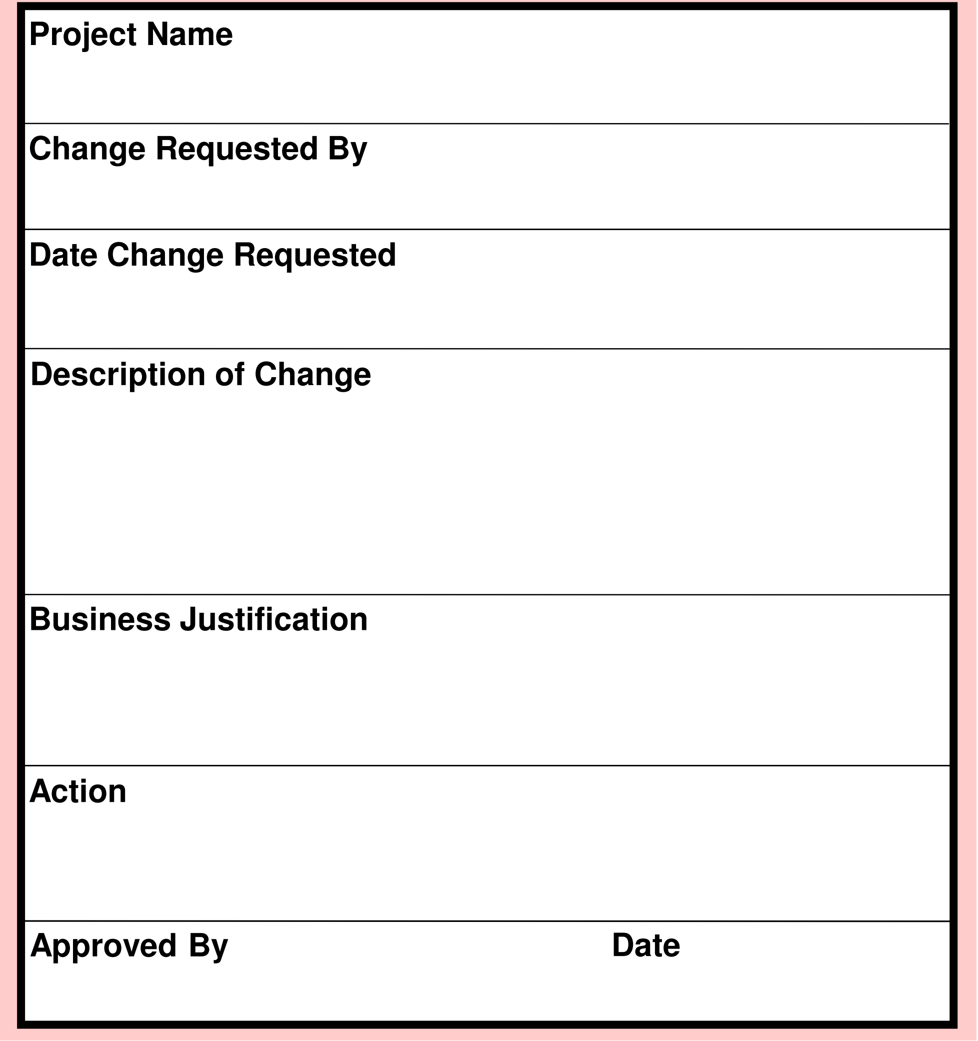


Figure 06-02

Scope Change Request Form



Project Name	
Change Requested By	
Date Change Requested	
Description of Change	
Business Justification	
Action	
Approved By	Date

Figure 06-03

Project Impact Statement - Contents

- What is the expected benefit of the change?
- How would the change affect the project’s cost?
- How would the change affect the project’s schedule?
- How would the change affect the software’s quality?
- How would the change affect the project’s resource allocation?
- Can the change be deferred to a later stage of the project or a later version of the software?
- Is the project at a point when making the change would risk destabilizing the software?

Project Impact Statement – Possible Outcomes

- Accommodated within project resources and timelines
- Accommodated but will require extension of deliverable schedule
- Accommodated within the current deliverable schedule but additional resources will be needed
- Accommodated but additional resources and extension of deliverable schedule will be needed
- Accommodated with multiple release strategy and prioritization of deliverables across release dates
- Not accommodated without significant change to project

Tips to help the client understand scope change

- Business needs change or are discovered during the project
- Scope change requests are expected
- Project team will analyze the request's impact on the project plan
- Project impact statement will define alternatives for accommodating the request
- Client will choose the alternative to be followed
- Project manager will adjust project plan accordingly and inform the client

Management Reserve

- A percentage (5-10%) of the project duration is set aside as a time contingency for processing and incorporating scope change requests.
- Utilizing a Scope Bank to store prioritized functions and features not yet integrated into the solution will help manage management reserve.

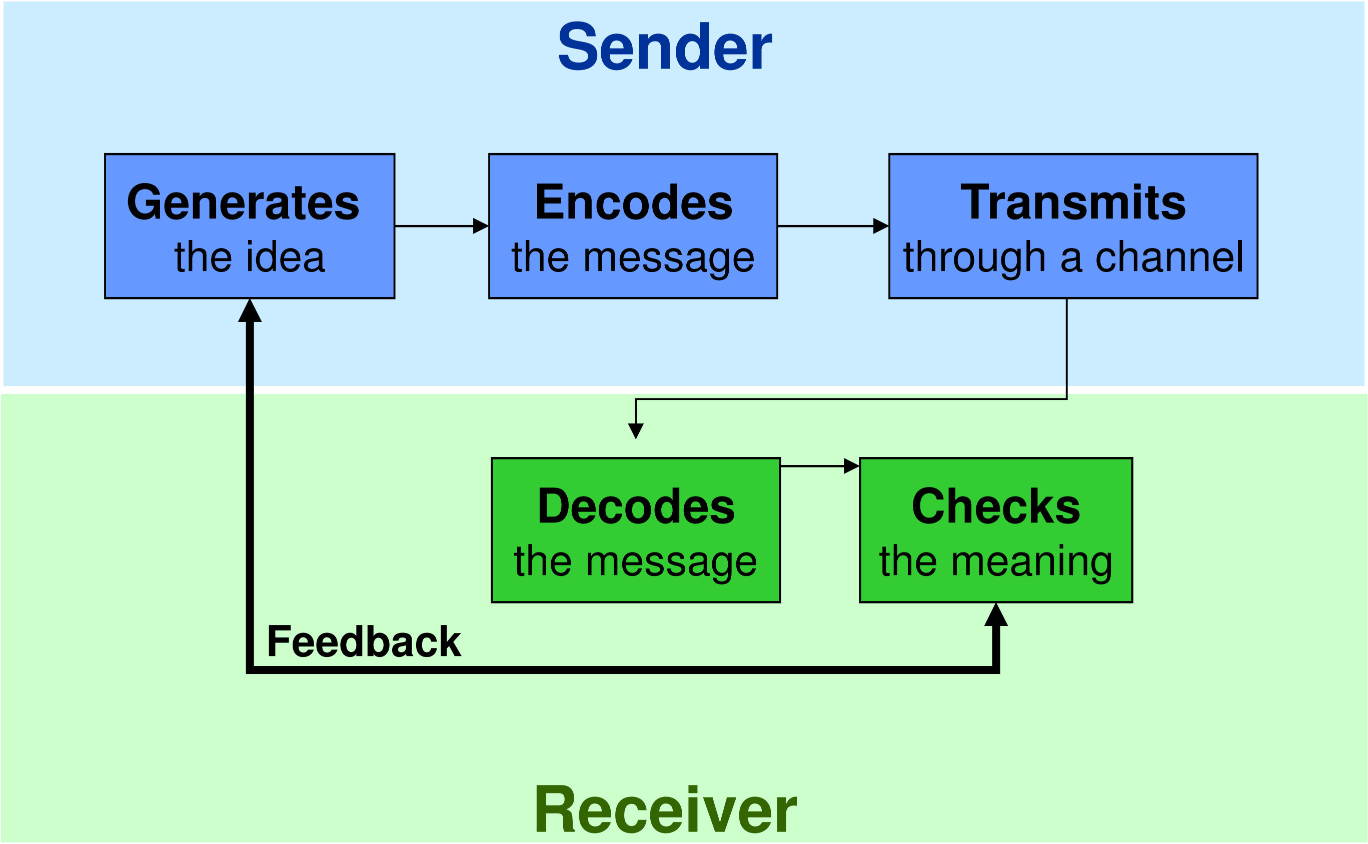
Scope Bank

- Set up a scope request bank account with an initial deposit of time (5-10% of total project work time) to be used to process cope changes and adjust the schedule.
- Utilize the Scope Bank to store prioritized change requests not yet integrated into the solution.
- Change requests can be handled at the end of a project cycle or as needed.

Managing Team Communications

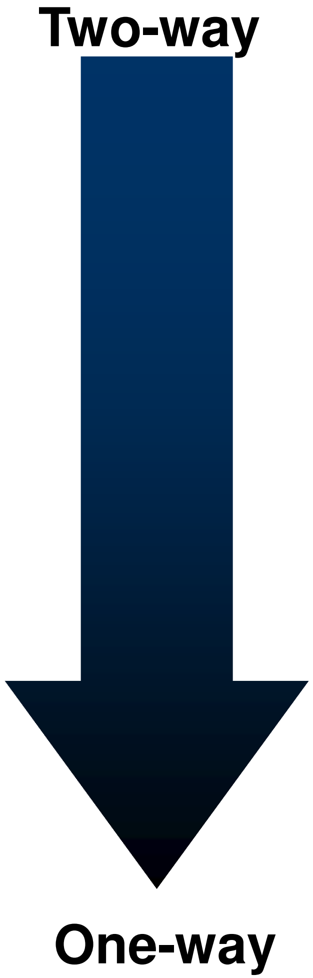
- Timing
- Content
- Choosing Effective Channels

Communications Management – The Process

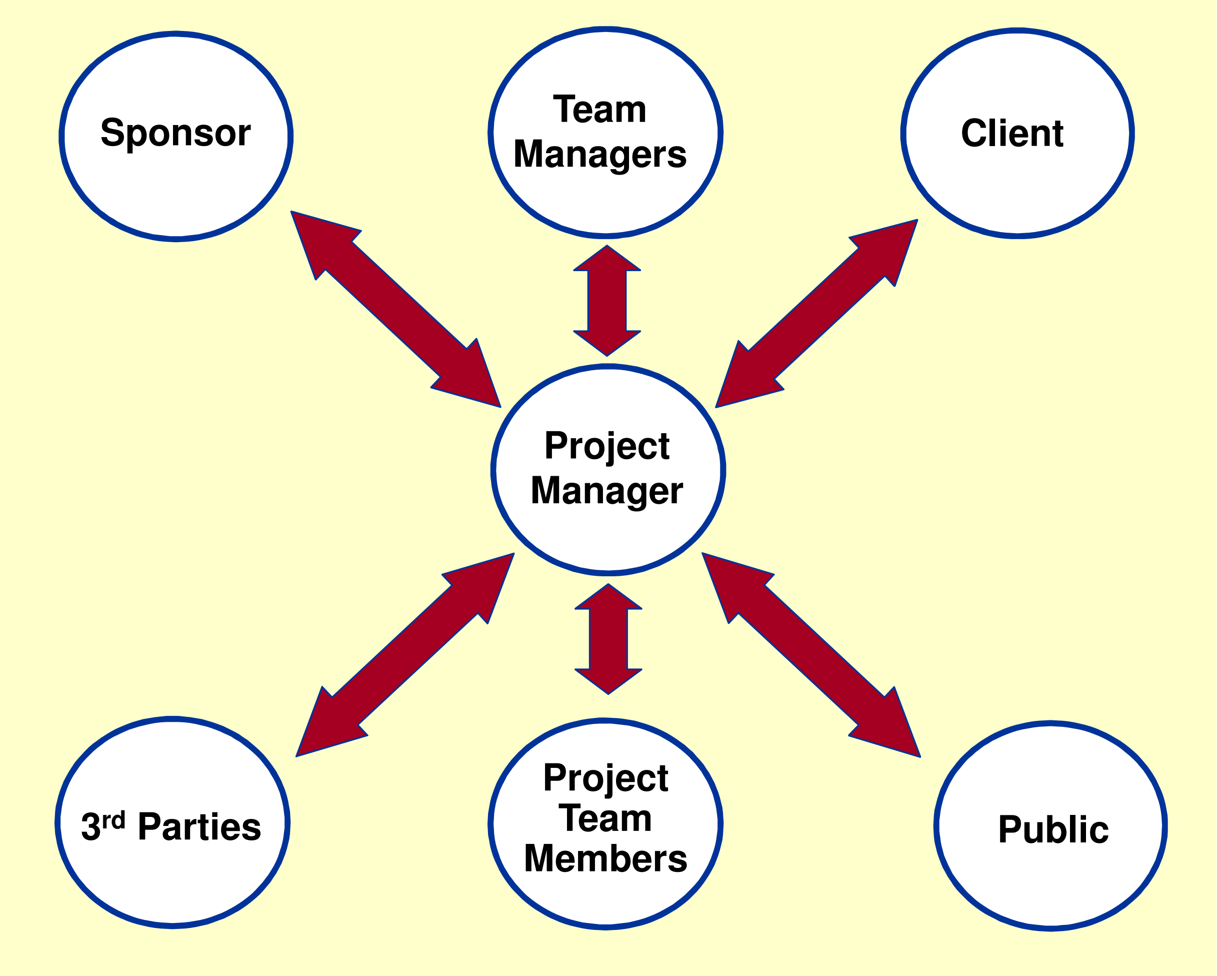


Communications Management – Types

- One-to-one
  - Conversations (in person and on the phone)
  - Meetings
- Electronic
  - E-mail messages
  - Websites
  - Databases
- Written
  - Memos
  - Letters
  - Documents
  - Reports



Communications Management – Interfaces



Sponsor

Team Managers

Client

Project Manager

3rd Parties

Project Team Members

Public

Assigning Resources

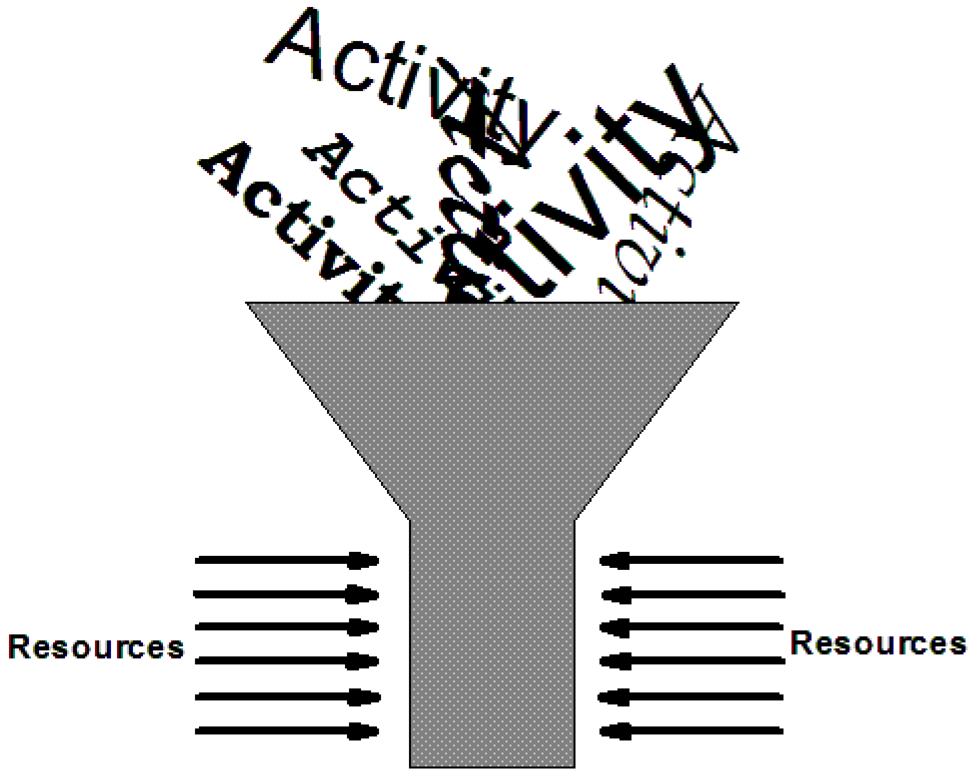


Figure 06-04

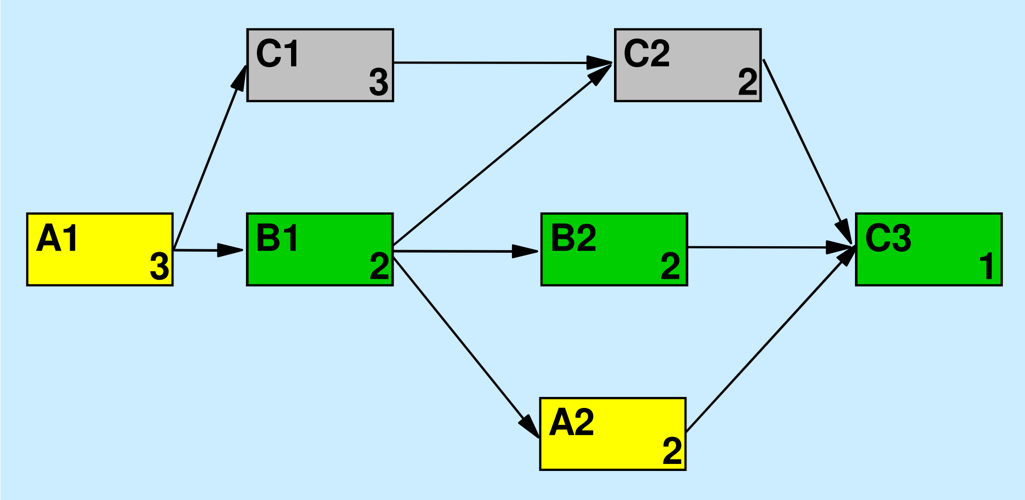
Resource-Leveling Strategies

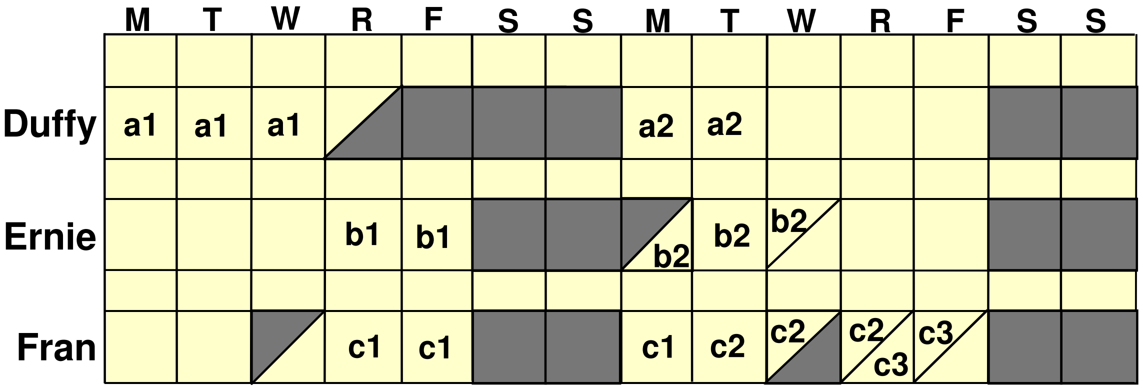
- Utilizing available slack
- Shifting the project finish date
- Smoothing

Alternative Methods of Scheduling Tasks

- Further decomposition of tasks
- Stretching tasks
- Assigning substitute resources

Launch the Project – Finalize Resources & Schedule





	M	T	W	R	F	S	S	M	T	W	R	F	S	S
Duffy	a1	a1	a1	◪	▨	▨	▨	a2	a2				▨	▨
Ernie				b1	b1	▨	▨	b2	b2	b2			▨	▨
Fran			◪	c1	c1	▨	▨	c1	c2	c2	c2 c3	c3	▨	▨

Figure 06-05

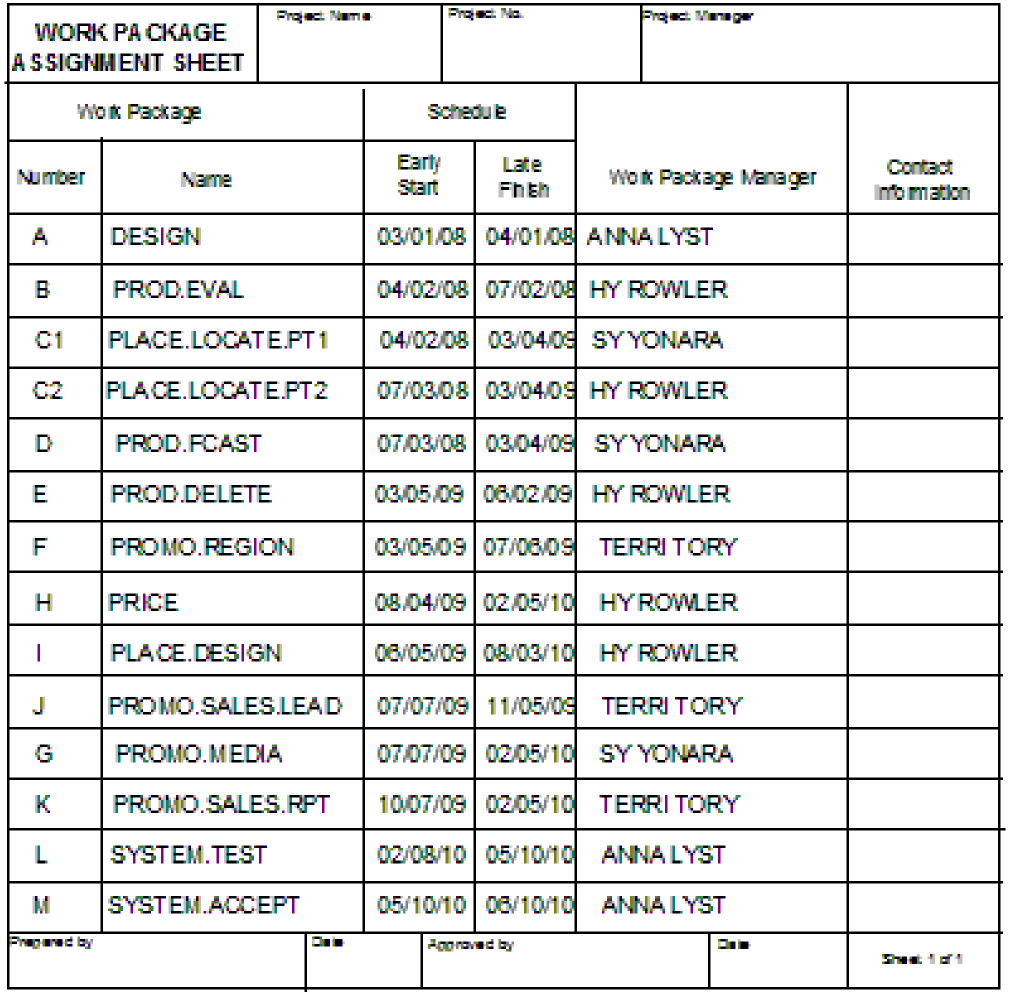
Launch the Project – Work Packages

A Work Package is a brief description at the subtask level that describes how a task will be completed. It is a primitive project plan.

Work Packages should be written for:

- Critical path tasks
- High-risk tasks
- Tasks requiring scarce resources
- Tasks with large duration variances

Launch the Project – Work Package Assignment Sheet



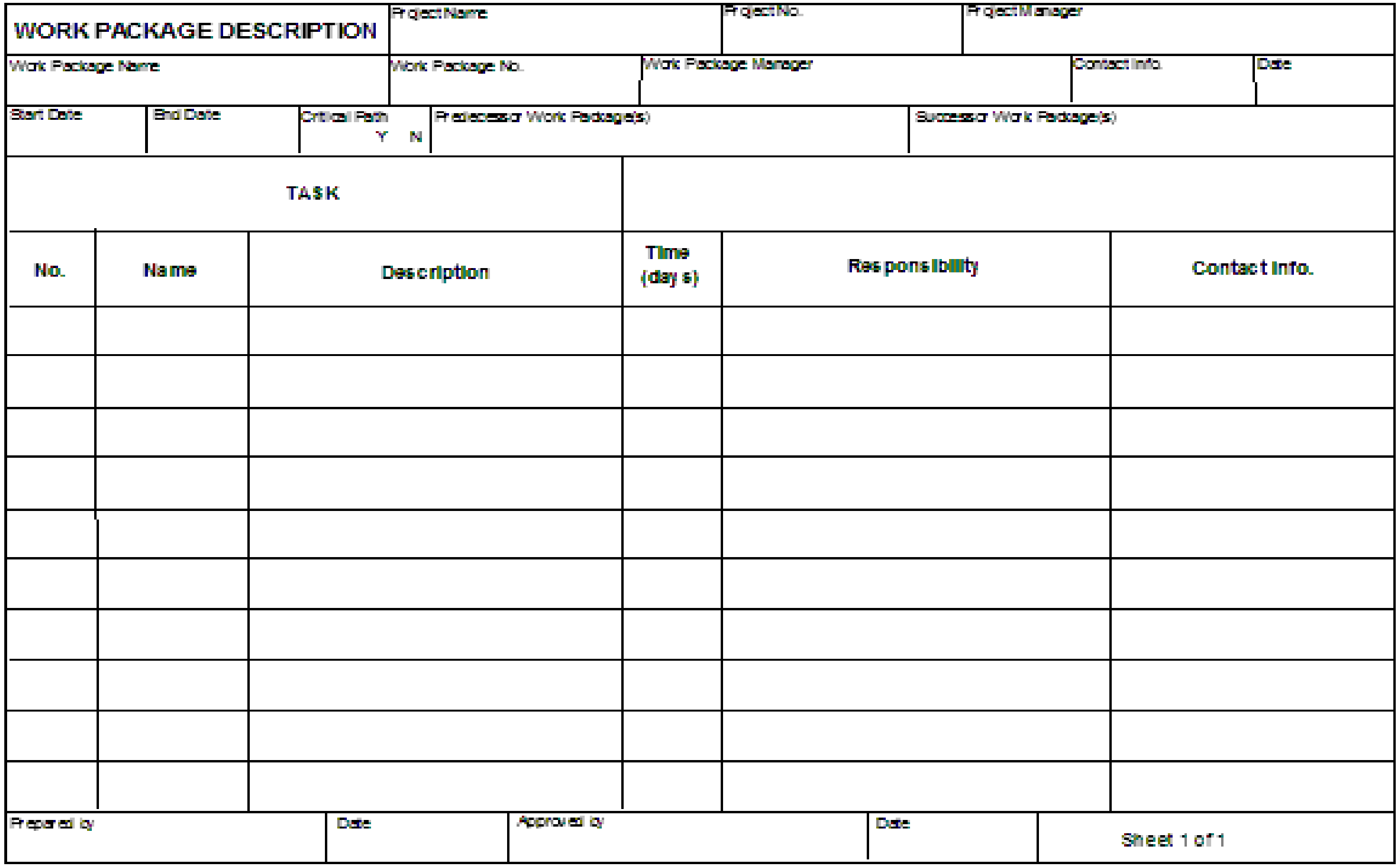
WORK PACKAGE ASSIGNMENT SHEET	Project Name	Project No.	Project Manager

Work Package		Schedule		Work Package Manager	Contact Information
Number	Name	Early Start	Late Finish		
A	DESIGN	03/01/08	04/01/08	ANNA LYST	
B	PROD.EVAL	04/02/08	07/02/08	HY ROWLER	
C1	PLACE.LOCATE.PT1	04/02/08	03/04/09	SY YONARA	
C2	PLACE.LOCATE.PT2	07/03/08	03/04/09	HY ROWLER	
D	PROD.FCAST	07/03/08	03/04/09	SY YONARA	
E	PROD.DELETE	03/05/09	06/02/09	HY ROWLER	
F	PROMO.REGION	03/05/09	07/06/09	TERRI TORY	
H	PRICE	08/04/09	02/05/10	HY ROWLER	
I	PLACE.DESIGN	06/05/09	08/03/10	HY ROWLER	
J	PROMO.SALES.LEAD	07/07/09	11/05/09	TERRI TORY	
G	PROMO.MEDIA	07/07/09	02/05/10	SY YONARA	
K	PROMO.SALES.RPT	10/07/09	02/05/10	TERRI TORY	
L	SYSTEM.TEST	02/08/10	05/10/10	ANNA LYST	
M	SYSTEM.ACCEPT	05/10/10	06/10/10	ANNA LYST	

Prepared by	Date	Approved by	Date	Sheet 1 of 1

Figure 06-06

Launch the Project – Work Package Description Form



WORK PACKAGE DESCRIPTION	Project Name	Project No.	Project Manager

Work Package Name	Work Package No.	Work Package Manager	Contact Info.	Date

Start Date	End Date	Critical Path Y N	Predecessor Work Package(s)	Successor Work Package(s)

TASK					
No.	**Name**	**Description**	**Time (days)**	**Responsibility**	**Contact Info.**

Prepared by	Date	Approved by	Date	Sheet 1 of 1

Figure 06-07

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch07: How to Monitor & Control a TPM Project

Presented by
(facilitator name)

Ch07: How to Monitor & Control a TPM Project

Summary of Chapter 7

- Using tools, templates, and processes to monitor & control a project
- Establishing your progress reporting system
- Applying graphical reporting tools
- Managing the Scope Bank
- Building and maintaining the Issues Log
- Managing project status meetings
- Defining a problem escalation
- Gaining approval to close the project

Tools, Templates, & Processes Used to Monitor & Control

- Current period reports
- Cumulative reports
- Exception reports
- Stoplight reports
- Variance reports
- Gantt charts
- Burn charts
- Milestone trend charts
- Earned value analysis
- Integrated milestone trend charts and earned value analysis
- Project status meetings
- Problem escalation strategies

How to Keep a Project on Schedule

- Hold daily team meetings
- Complete tasks ASAP
- Report problems ASAP
- Don’t fall victim to the “creeps”
- Don’t guess – ask questions
- Good enough is good enough
- Meet but do not exceed requirements
- Be open and honest with your teammates

Characteristics of Effective Progress Reporting

- Timely, complete, accurate, and intuitive
- Isn’t burdensome and counterproductive
- Readily acceptable to senior management
- Readily acceptable to the project team
- An effective early warning system

Ch07: How to Monitor & Control a TPM Project

How and What Information to Update

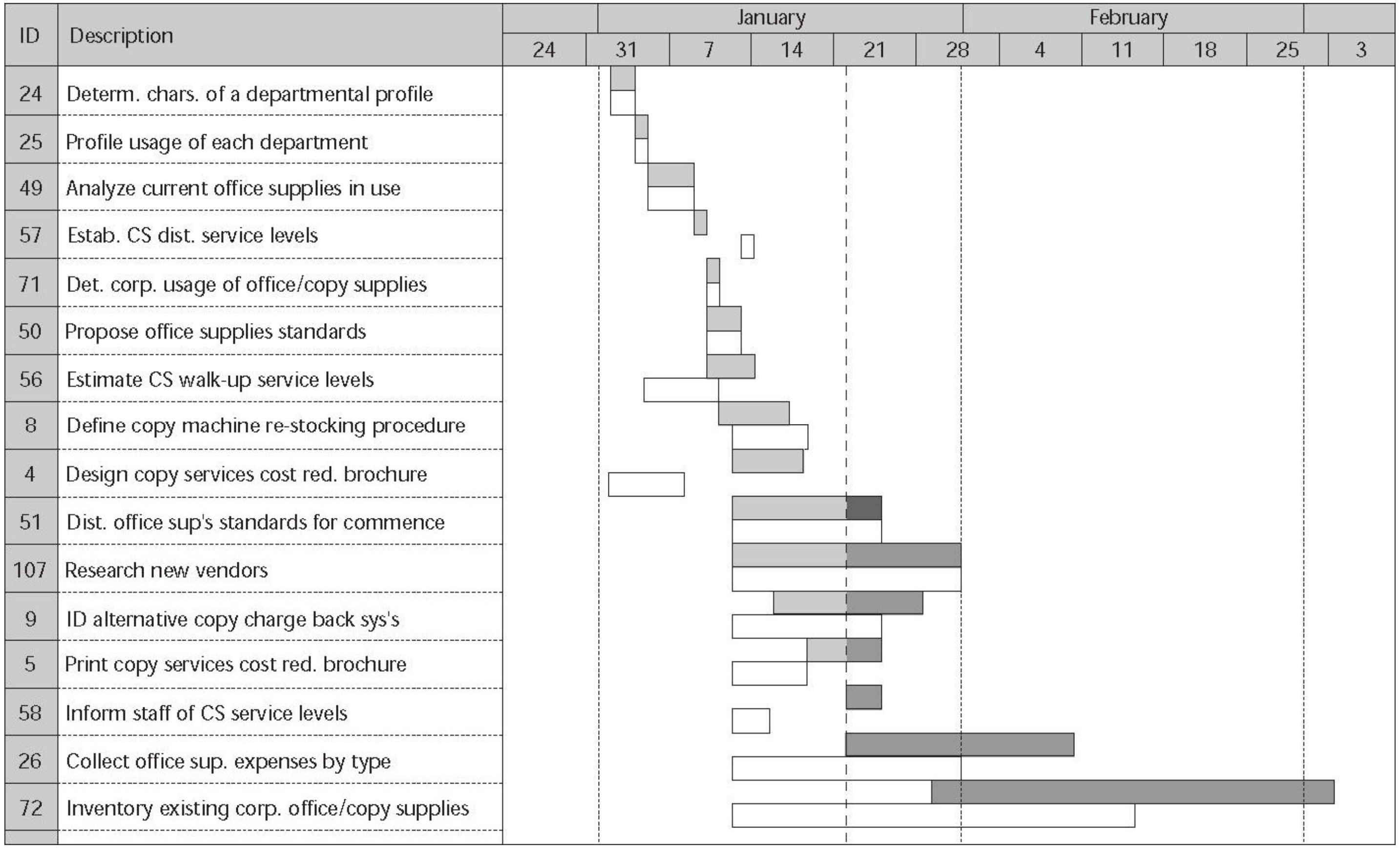
- Determine a set period of time and day of week
- Report actual work accomplished during this period
- Record historical and re-estimate remaining
- Report start and finish dates
- Record days of duration accomplished and remaining
- Report resource effort spent and remaining
- Report percent complete

Ch07: How to Monitor & Control a TPM Project

Five Types of Project Status Reports

- Current period reports
- Cumulative reports
- Exception reports
- Stoplight reports
- Variance reports

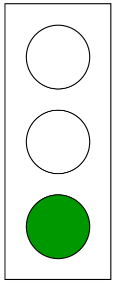
Gantt Chart Project Status Report



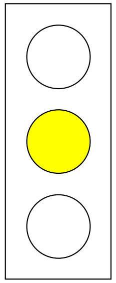
ID	Description
24	Determ. chars. of a departmental profile
25	Profile usage of each department
49	Analyze current office supplies in use
57	Estab. CS dist. service levels
71	Det. corp. usage of office/copy supplies
50	Propose office supplies standards
56	Estimate CS walk-up service levels
8	Define copy machine re-stocking procedure
4	Design copy services cost red. brochure
51	Dist. office sup's standards for commence
107	Research new vendors
9	ID alternative copy charge back sys's
5	Print copy services cost red. brochure
58	Inform staff of CS service levels
26	Collect office sup. expenses by type
72	Inventory existing corp. office/copy supplies

Figure 07-01

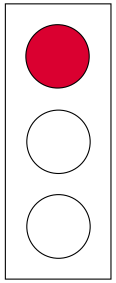
Exception Report – Stoplight Reports



The project is progressing according to plan.



The project has a problem.
A Get Well plan is in place.
The situation will correct.



The project is failing.
Intervention is required.

Ch07: How to Monitor & Control a TPM Project

Cumulative Reports - Milestone Trend Charts

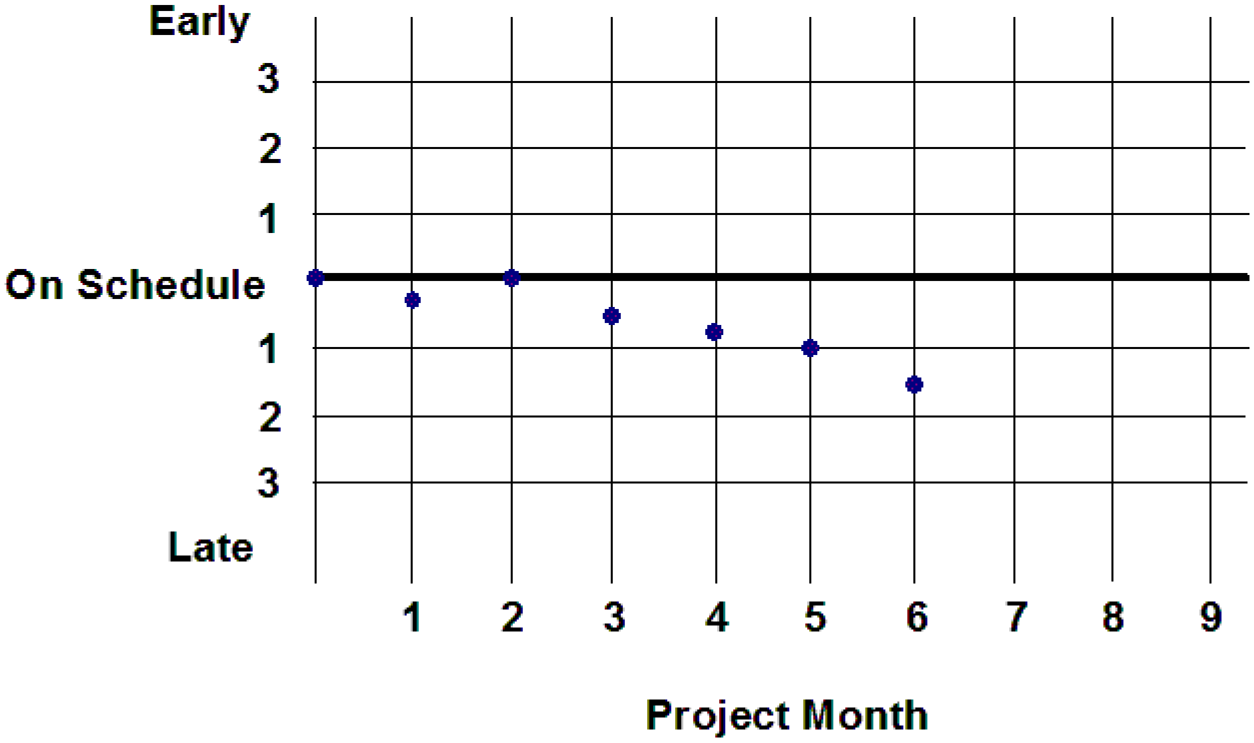


Figure 07-02

Cumulative Reports - Milestone Trend Charts

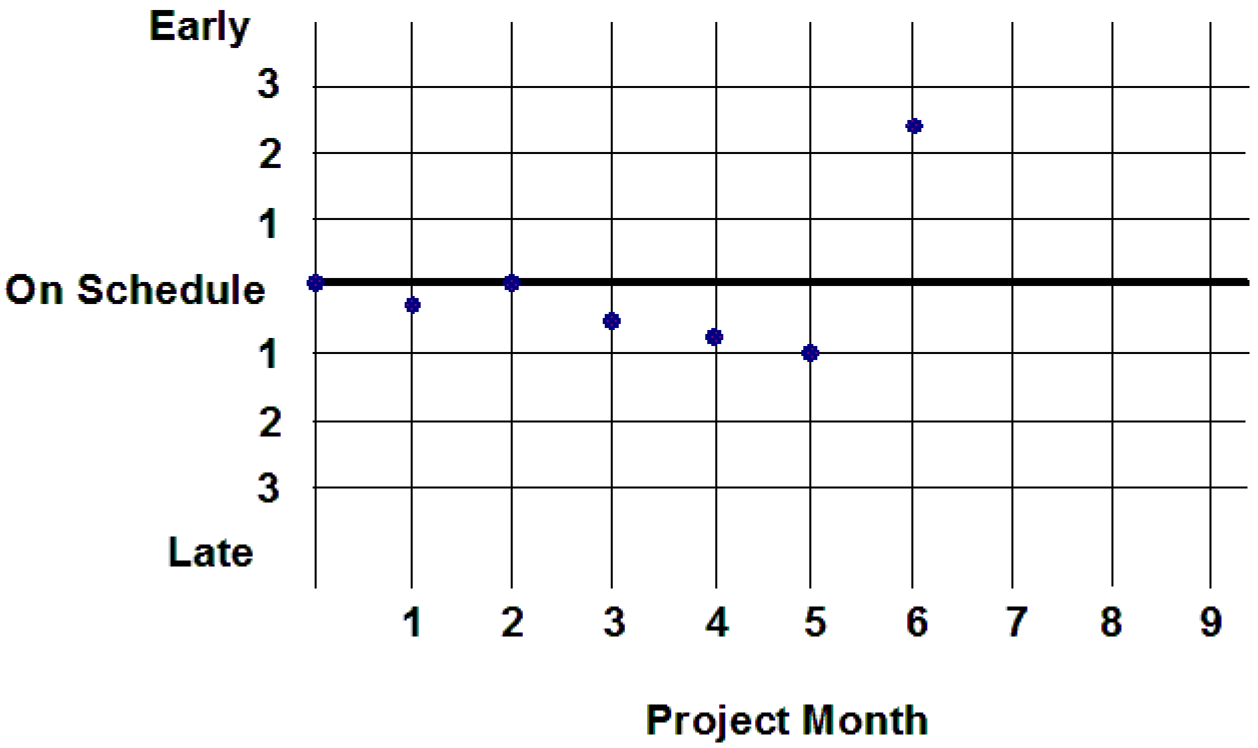


Figure 07-03

Ch07: How to Monitor & Control a TPM Project

Cumulative Reports - Milestone Trend Charts

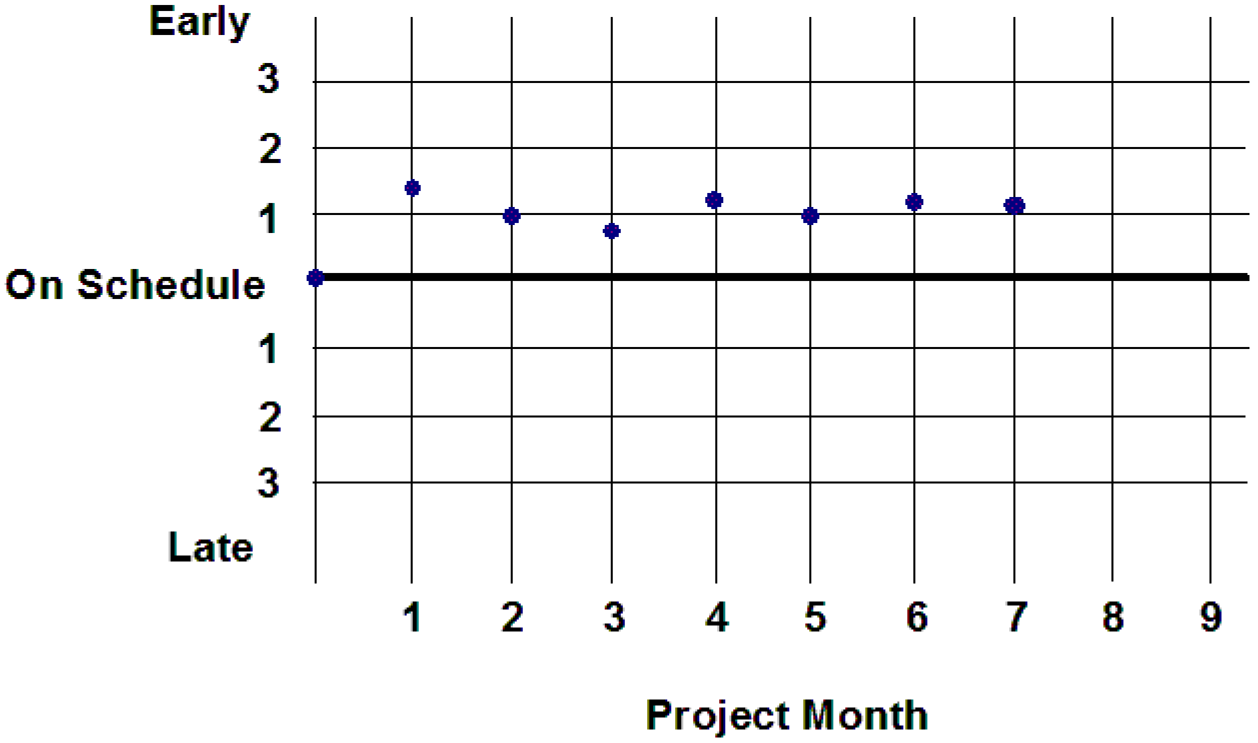


Figure 07-04

Ch07: How to Monitor & Control a TPM Project

Cumulative Reports - Milestone Trend Charts

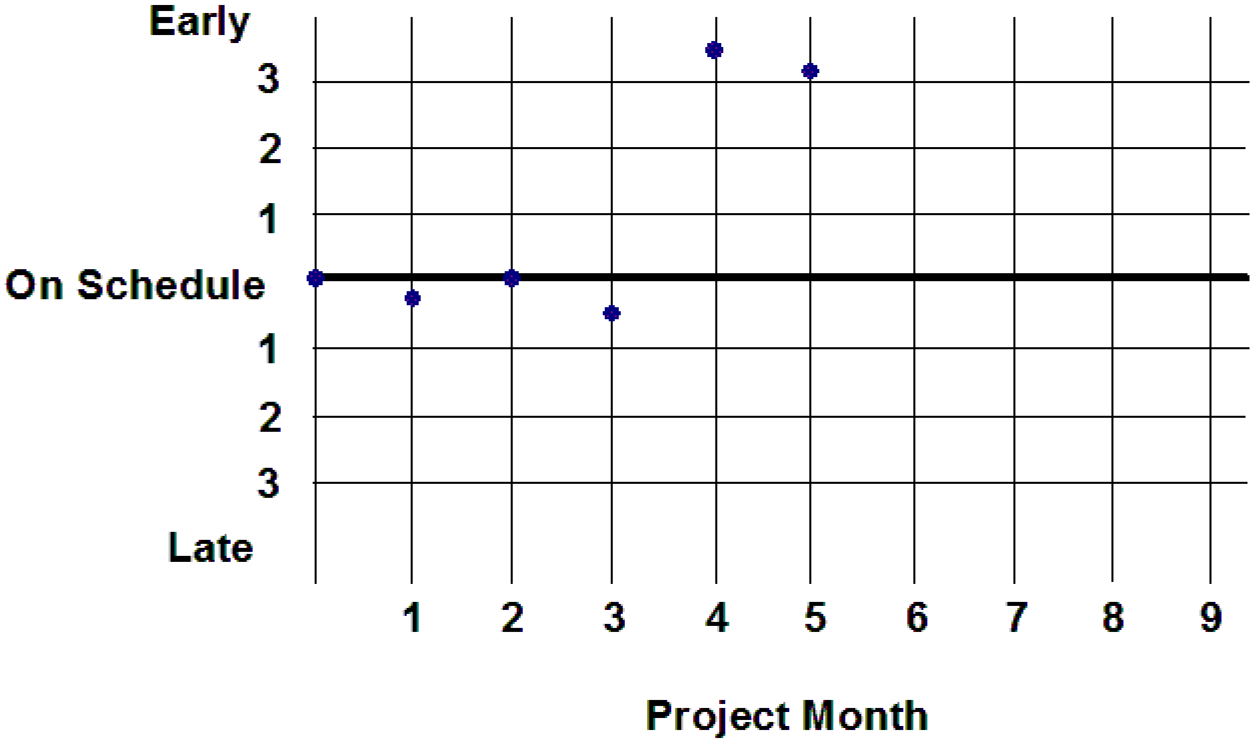


Figure 07-05

Earned Value – The Standard S-Curve

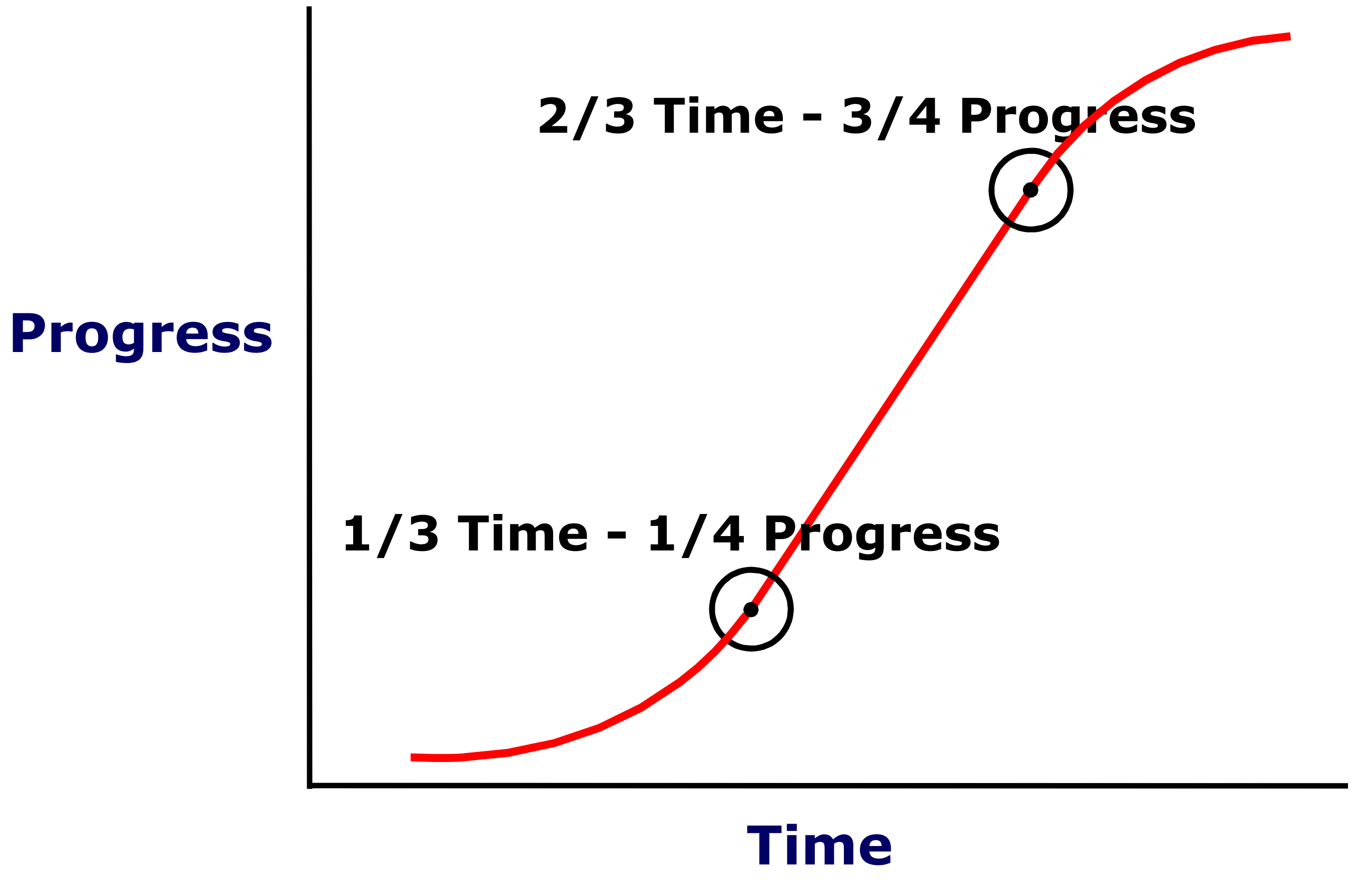
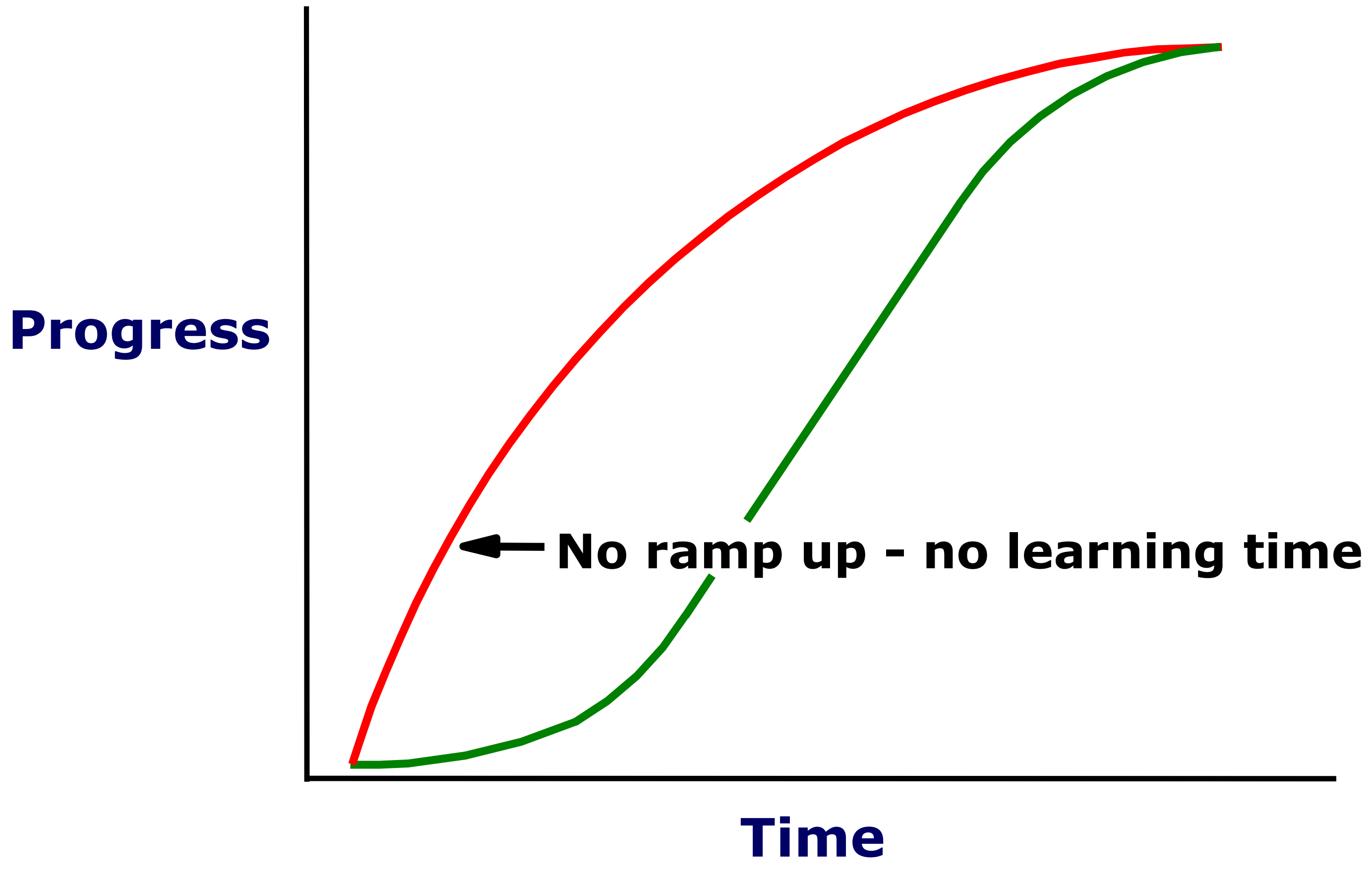
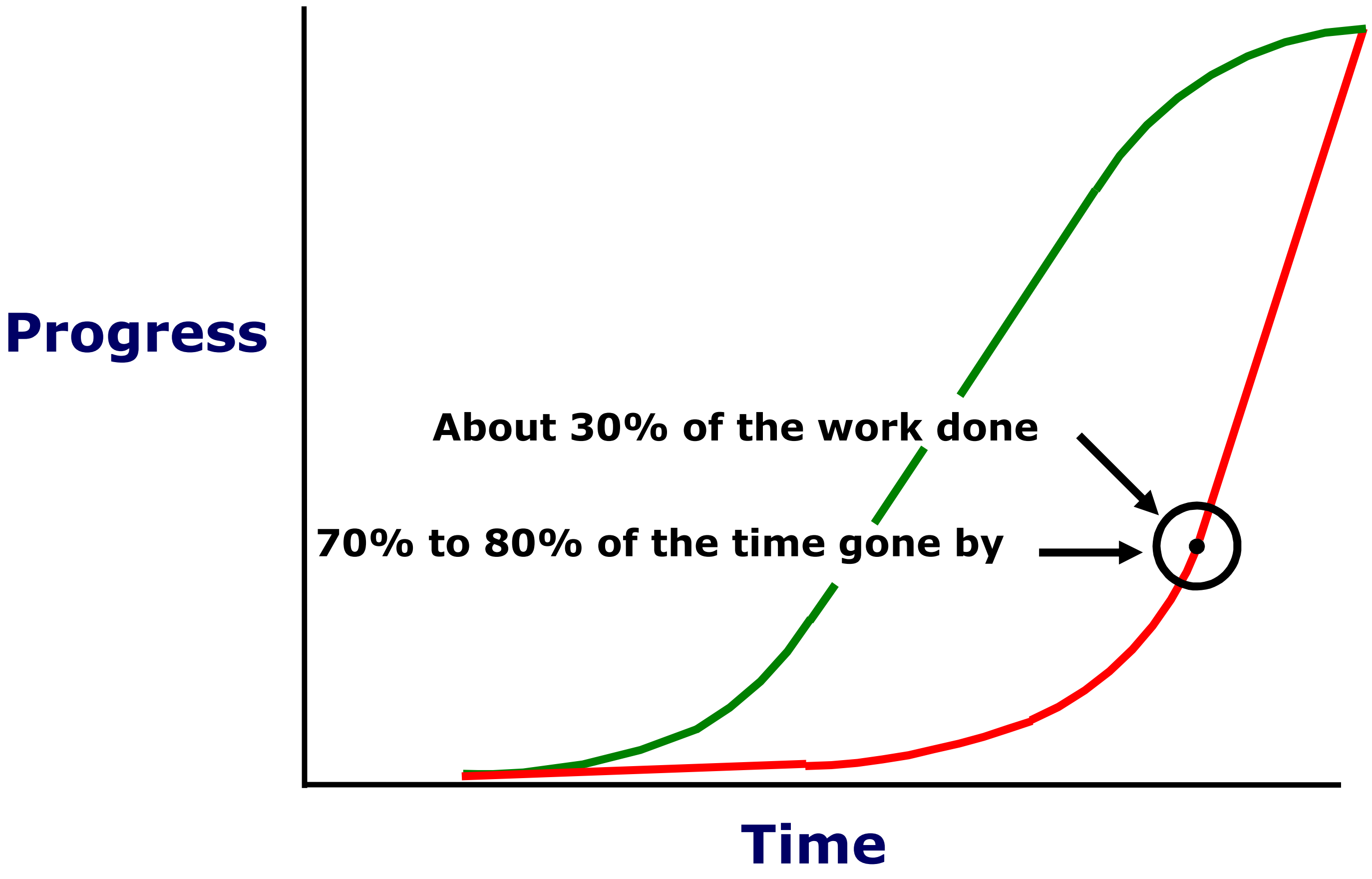


Figure 07-06

Earned Value – The Aggressive Curve

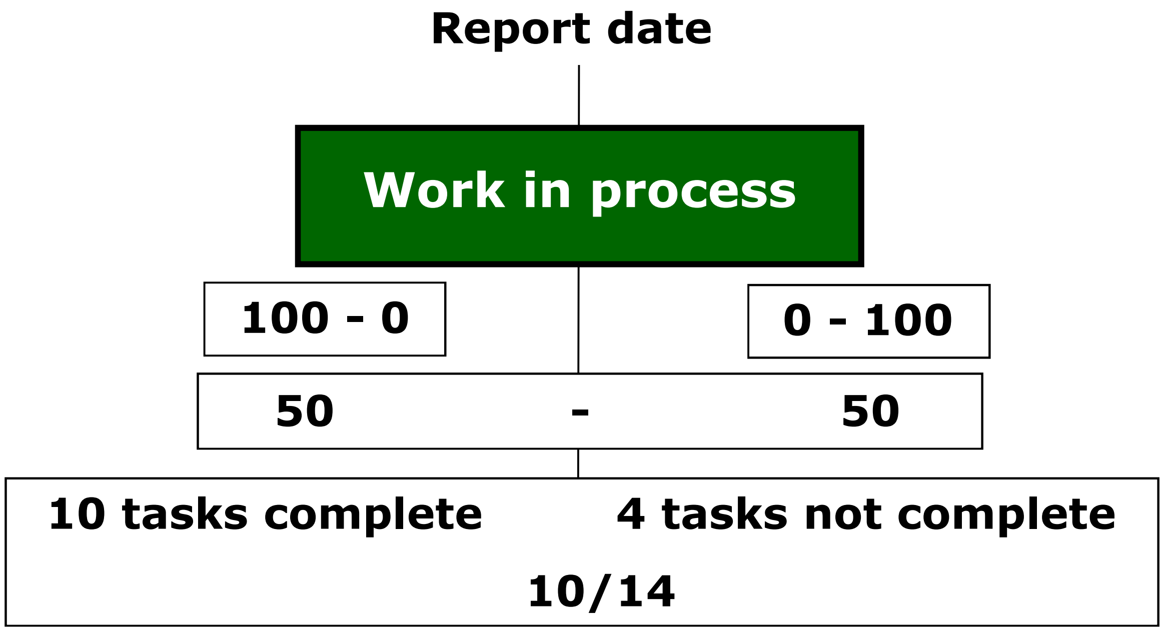


Earned Value – The Curve to Avoid



How to Measure Percent of Value Earned

- 100 – 0
- 0 – 100
- 50 – 50
- Proportion of tasks completed



Report date

Work in process

100 - 0

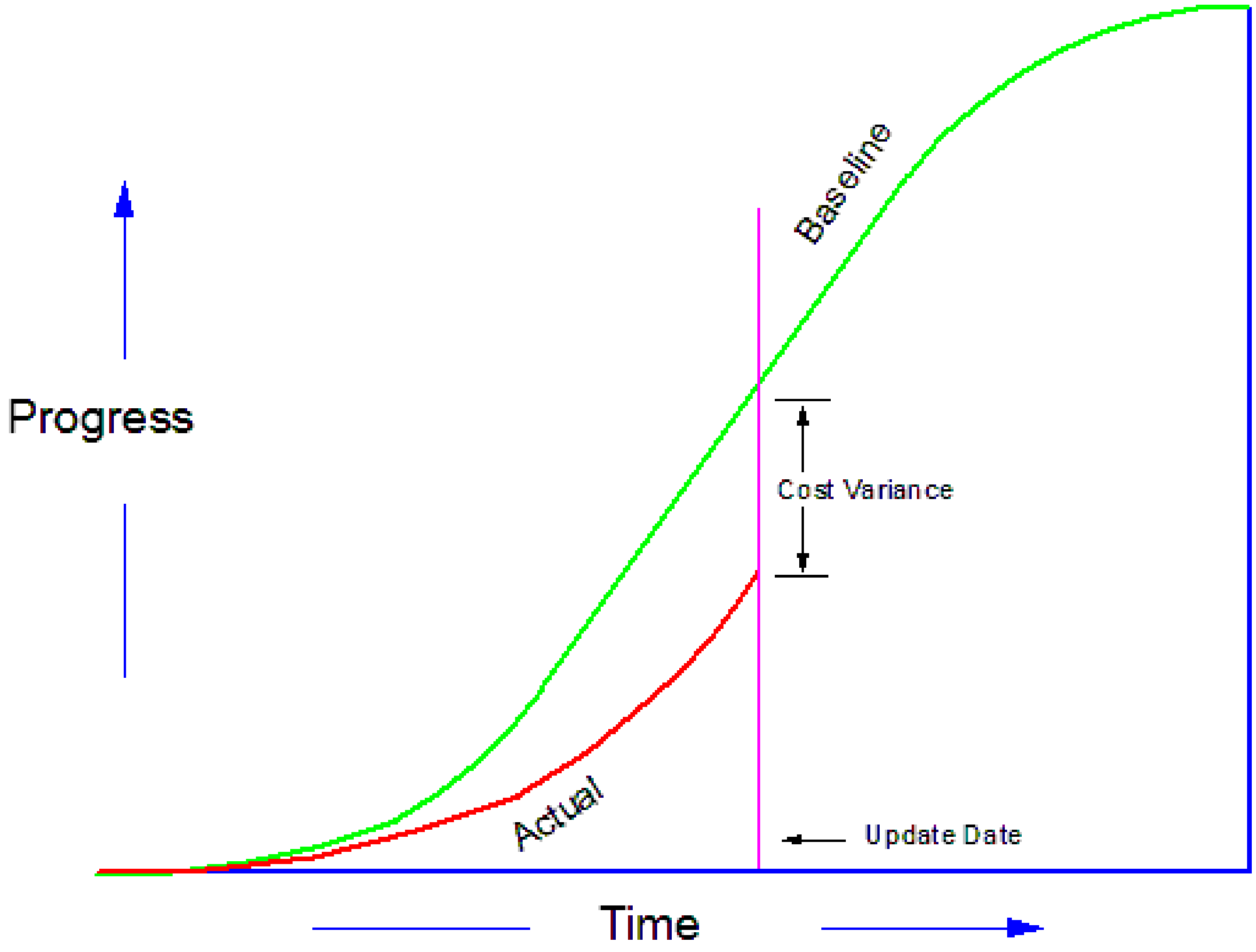
0 - 100

50 - 50

10 tasks complete **4 tasks not complete**

10/14

Earned Value – Cost Variance



Earned Value – Schedule Variance

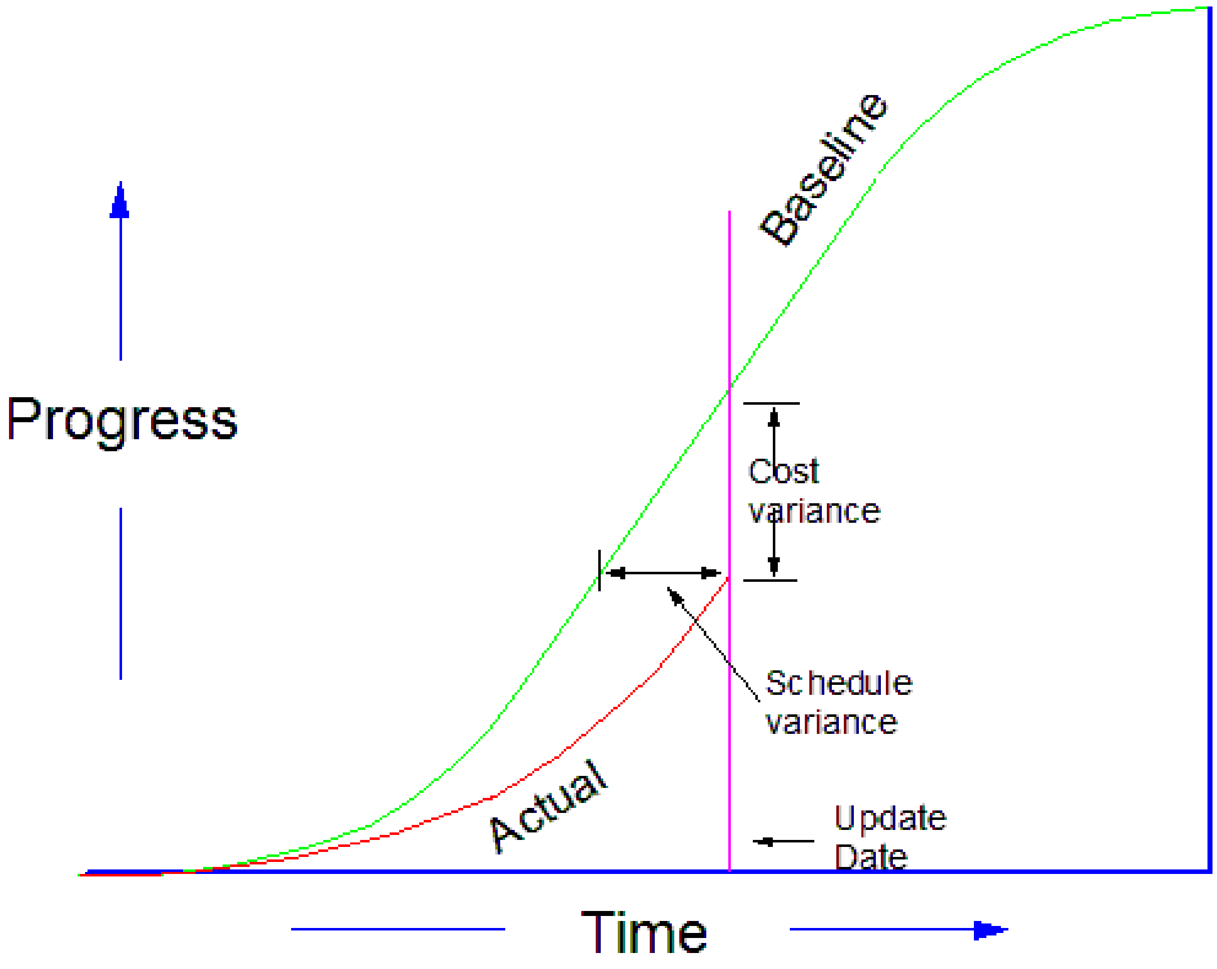
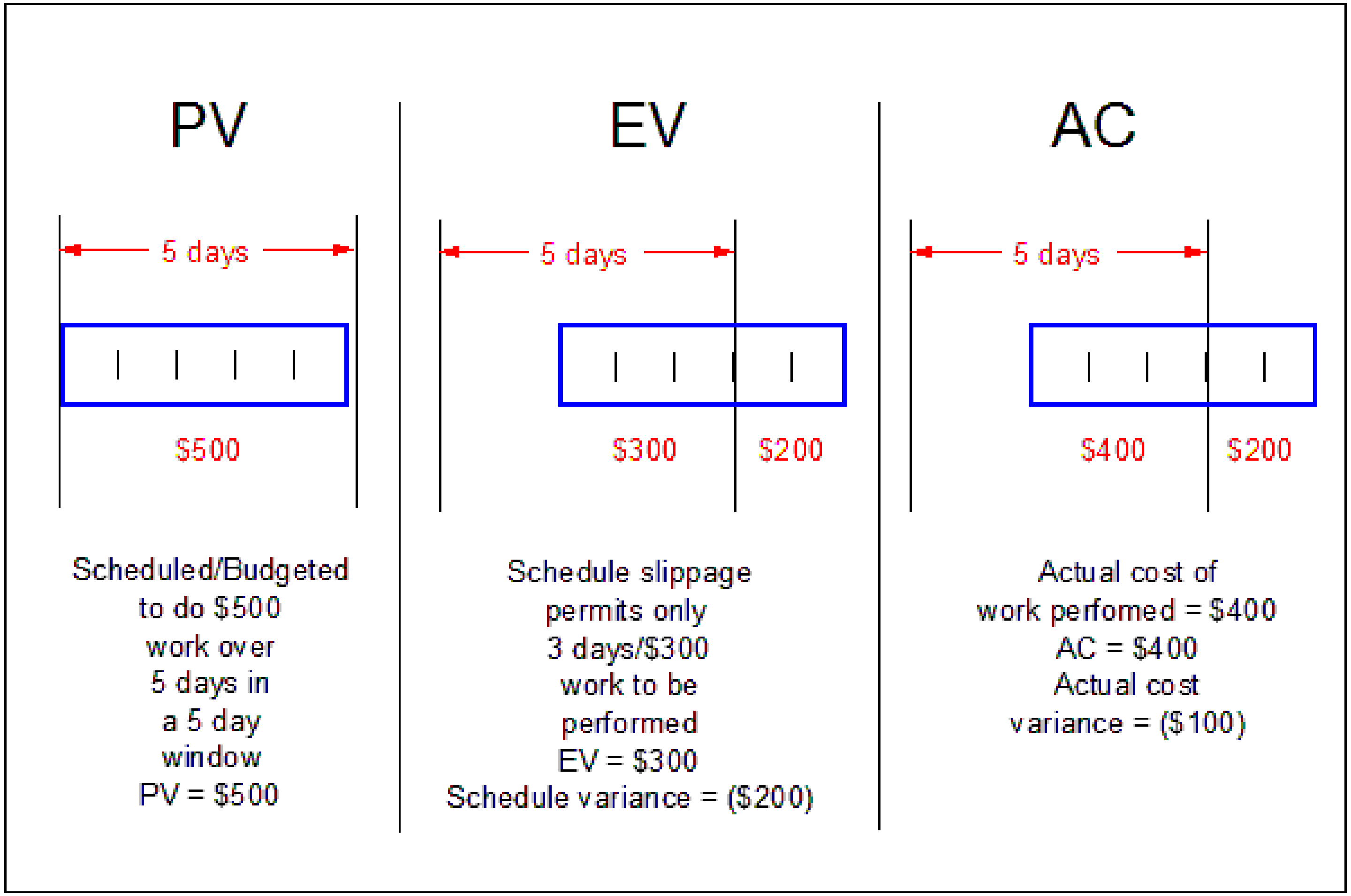


Figure
07-08

How to Measure Earned Value



Scheduled/Budgeted
to do $500
work over
5 days in
a 5 day
window
PV = $500

Schedule slippage
permits only
3 days/$300
work to be
performed
EV = $300
Schedule variance = ($200)

Actual cost of
work perfomed = $400
AC = $400
Actual cost
variance = ($100)

Figure 07-09

Earned Value – The Full Story

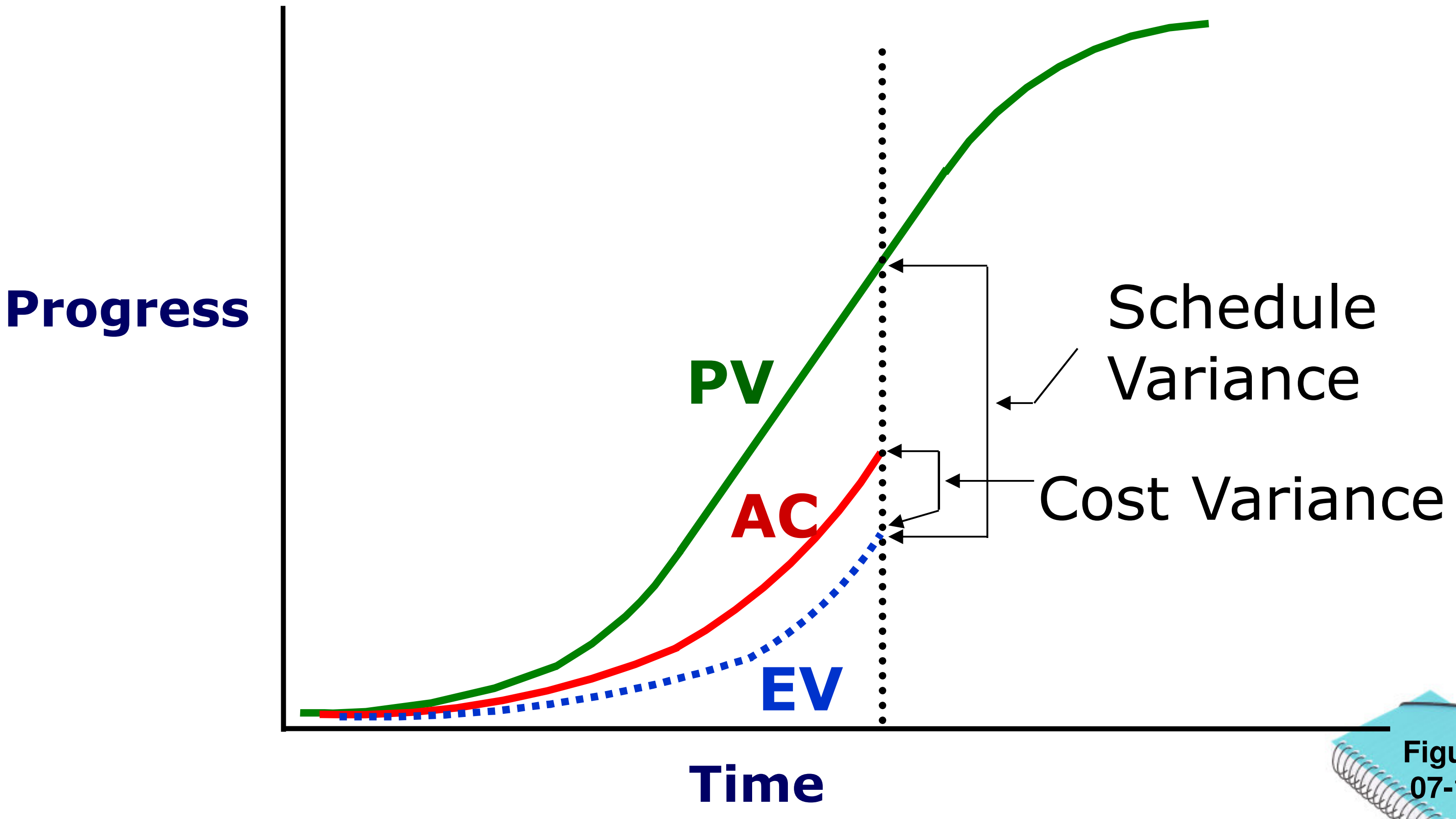


Figure 07-10

Earned Value – PV, EV and AC curves

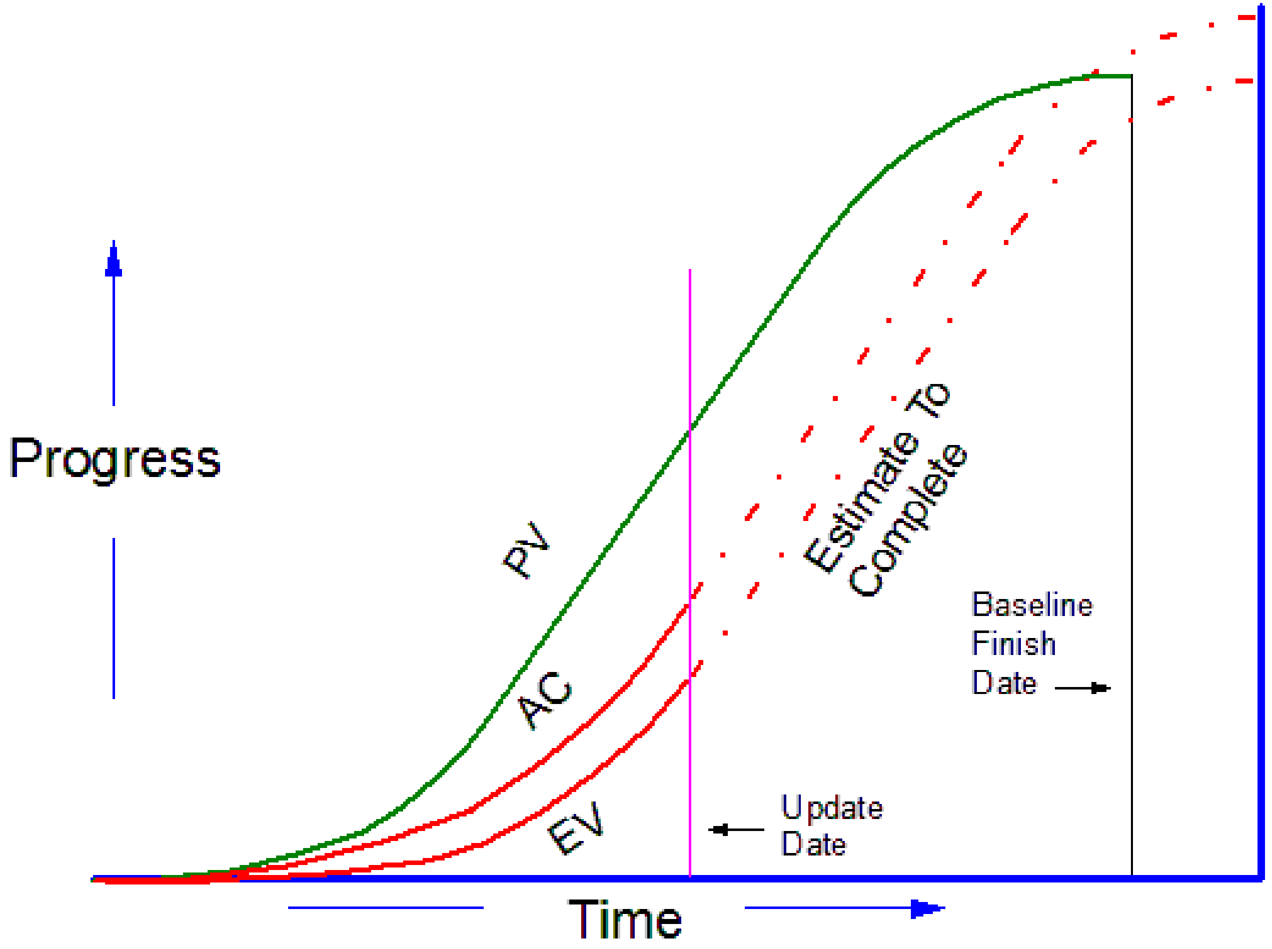
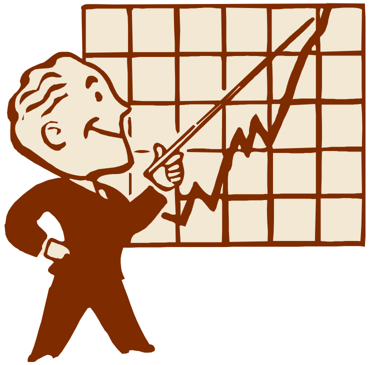


Figure 07-11

Earned Value – Basic Performance Indices



Schedule Performance Index (SPI)

A measure of how close the project is to performing work as it was actually scheduled.

SPI = EV/PV

Cost Performance Index (CPI)

A measure of how close the project is to spending on the work performed to what was planned to have been spent.

CPI = EV/AC

INDEX VALUES
< 1: over budget or behind schedule
> 1: under budget or ahead of schedule

Earned Value – Performance Indices

Project: ALPHA

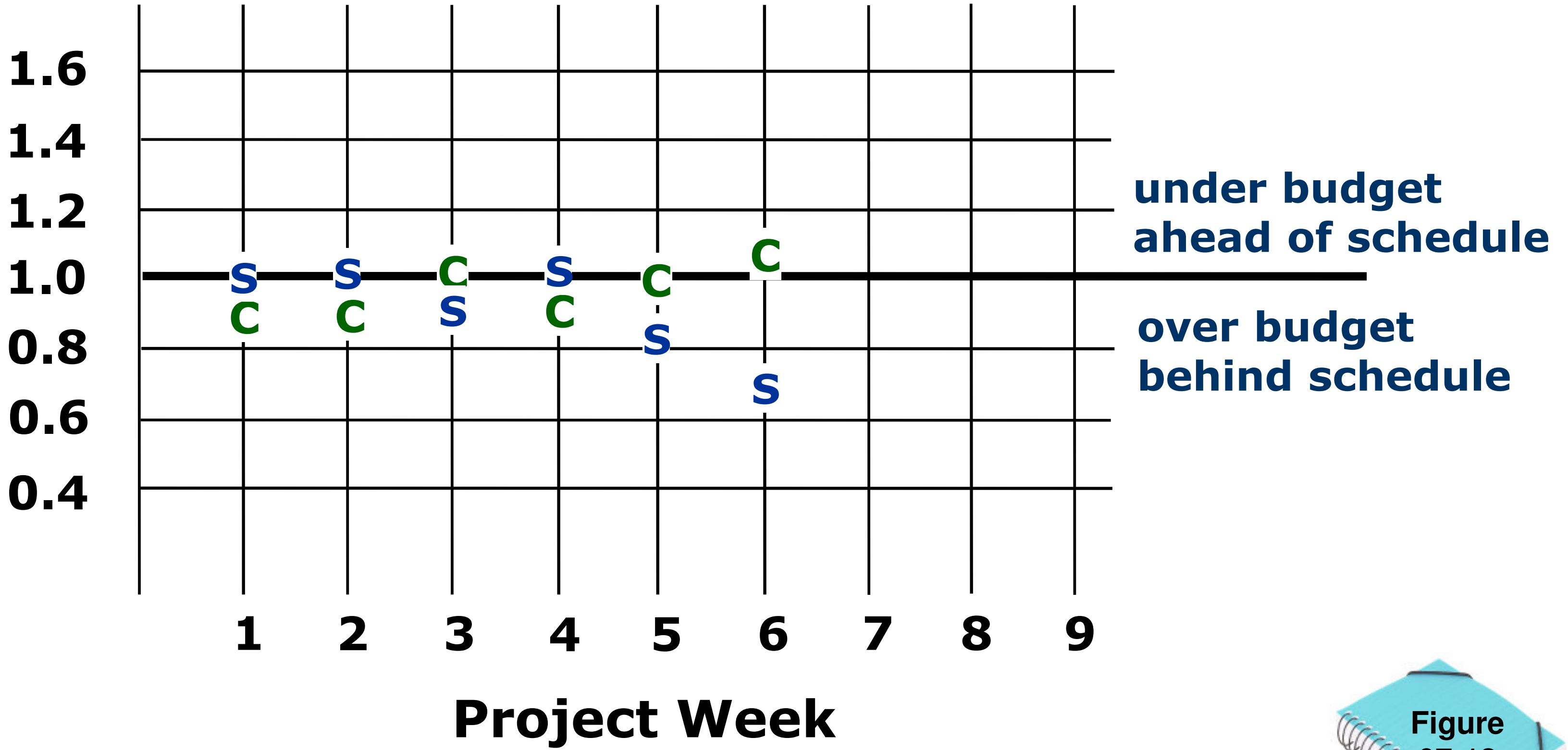


Figure 07-12

Earned Value – Performance Indices

Project: ALPHA

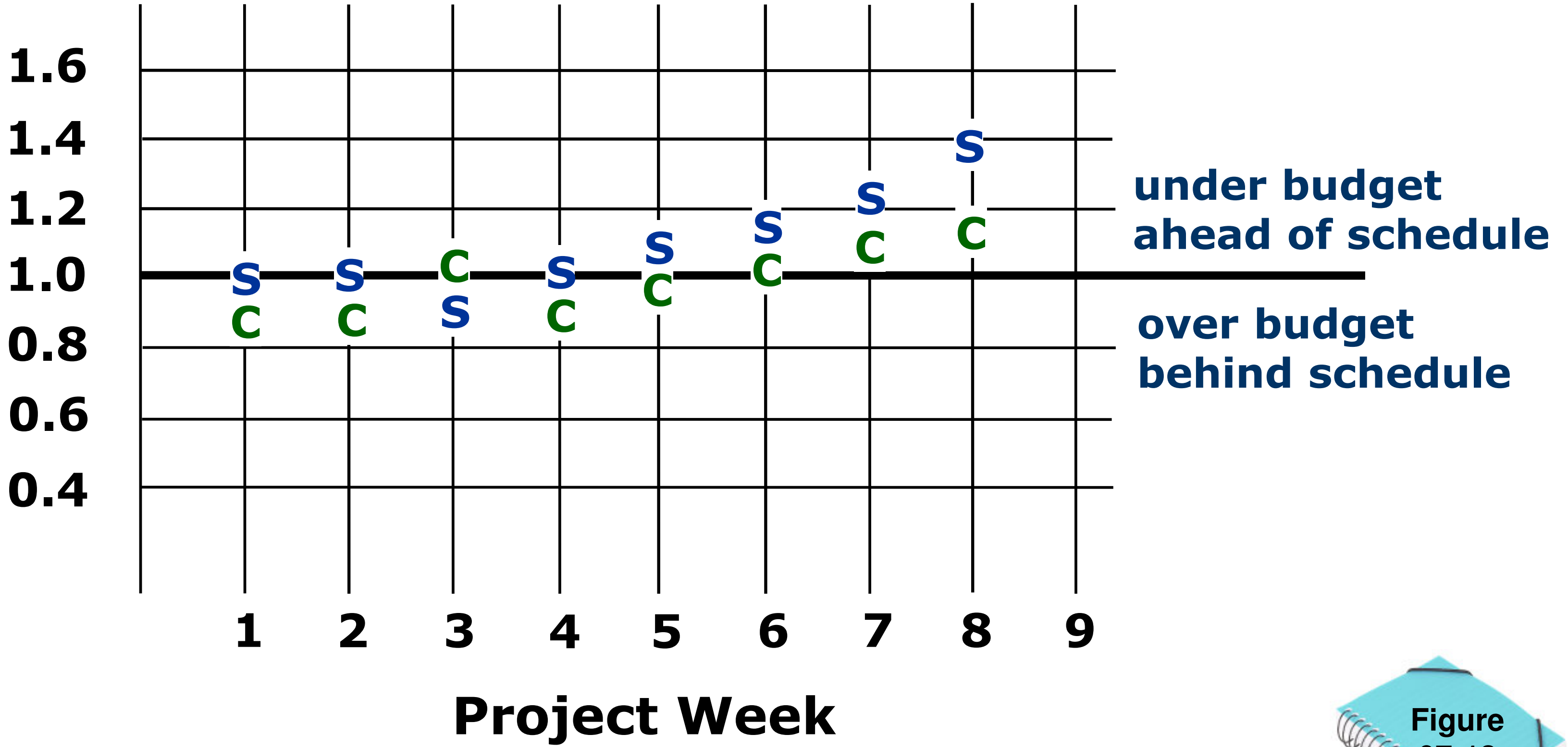


Figure 07-13

Earned Value – Performance Indices

Project: ALPHA

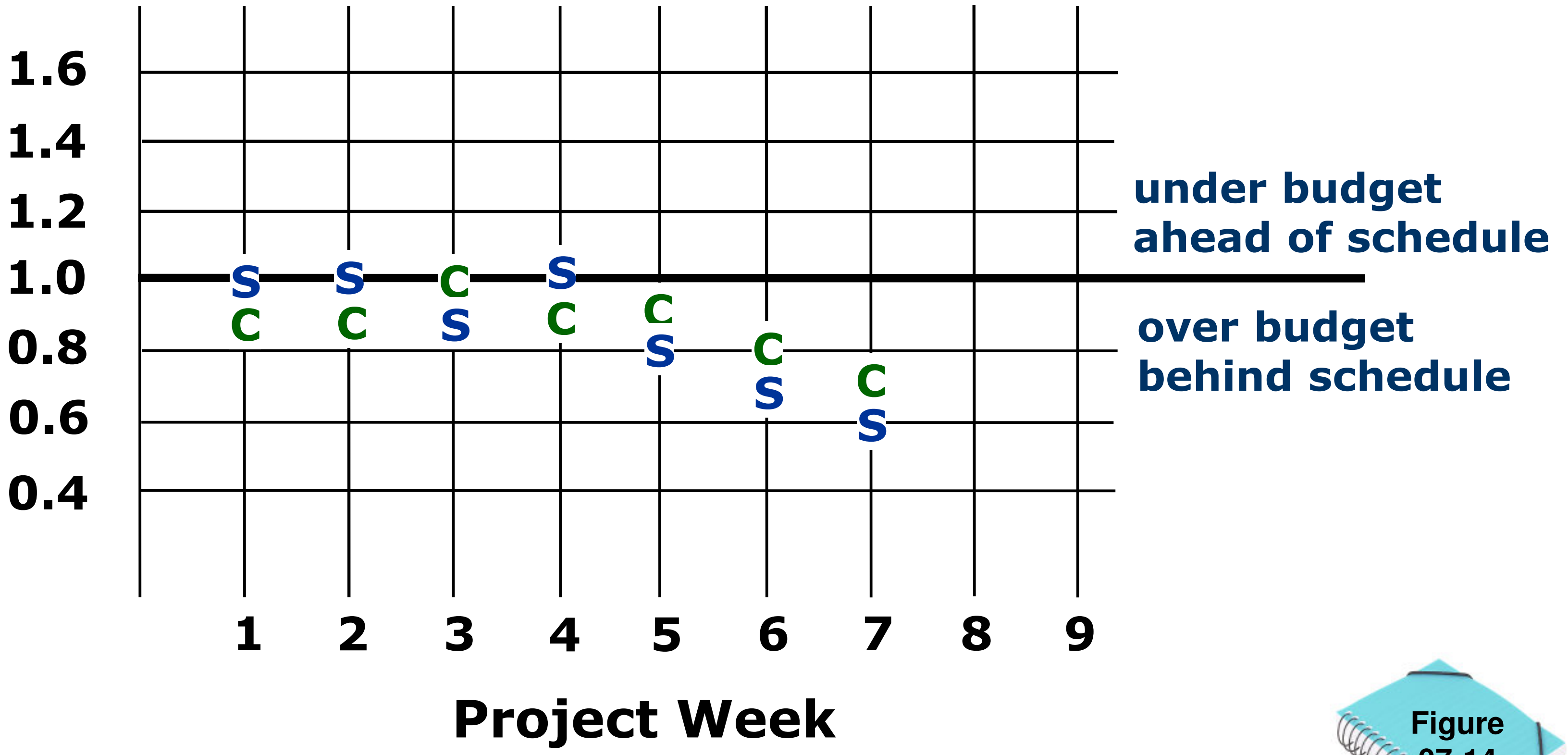
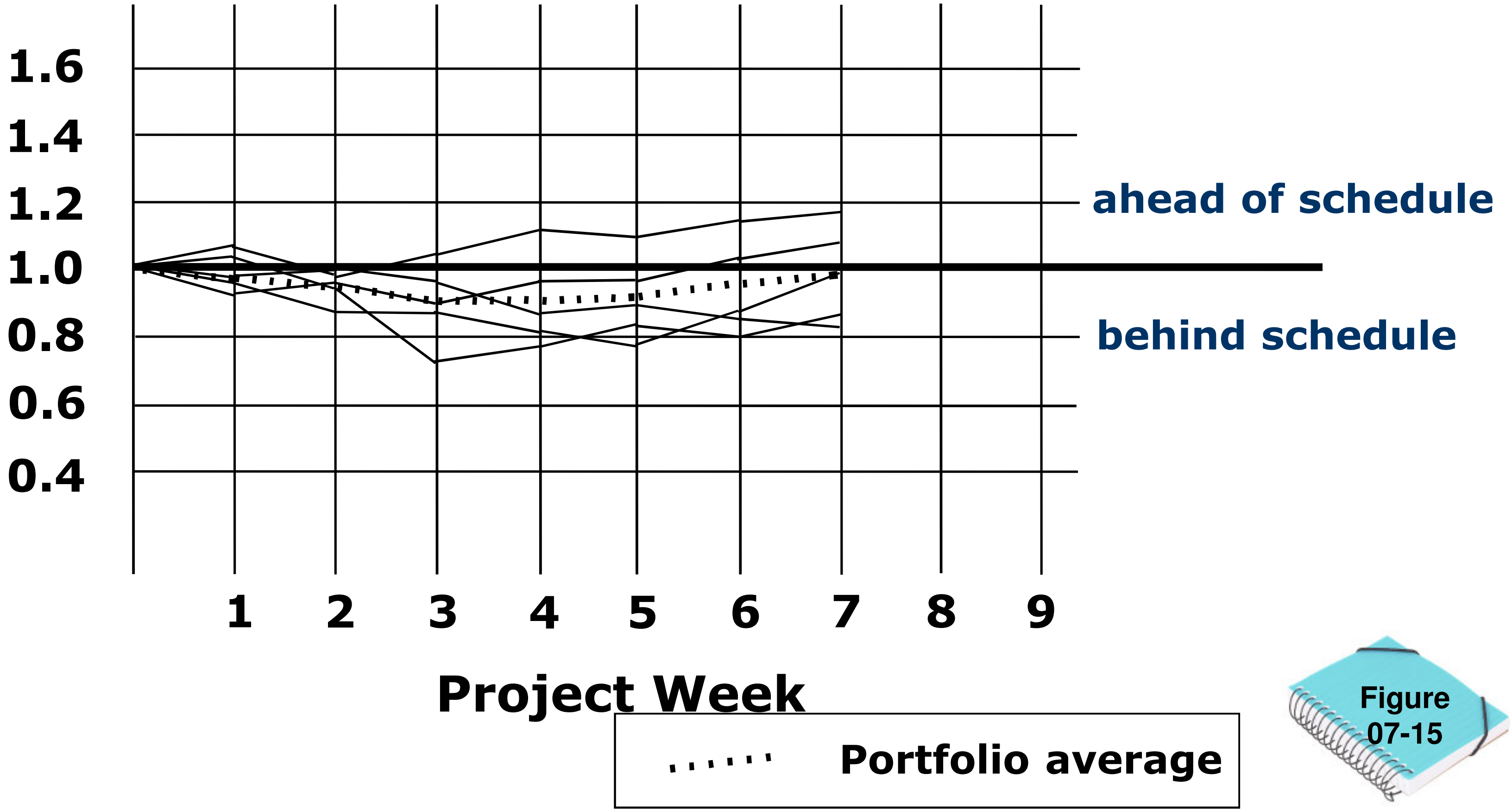


Figure 07-14

Earned Value – Performance Indices

Portfolio: BETA Program



Managing the Scope Bank

- Initial deposit of 10% of total labor days
- All of the unfinished functions and features and the labor time to develop them are also deposited in the Scope Bank.
- The time to process and integrate a Scope Change request draws time from the Scope Bank.
- To add time to the Scope Bank remove unfinished functions and features and deposit their labor time in the Scope Bank.
- Client should continuously reprioritize contents of the Scope Bank

Ch07: How to Monitor & Control a TPM Project

Maintaining the Issues Log

- ID Number
- Date logged
- Description of the problem
- Impact if not resolved
- The problem owner
- Action to be taken
- Status
- Outcome

Ch07: How to Monitor & Control a TPM Project

Managing Project Status Meetings

- Who Should Attend?
- When Are They Held?
- What Is Their Purpose?
- What Is Their Format?

The 15-Minute Daily Status Meeting

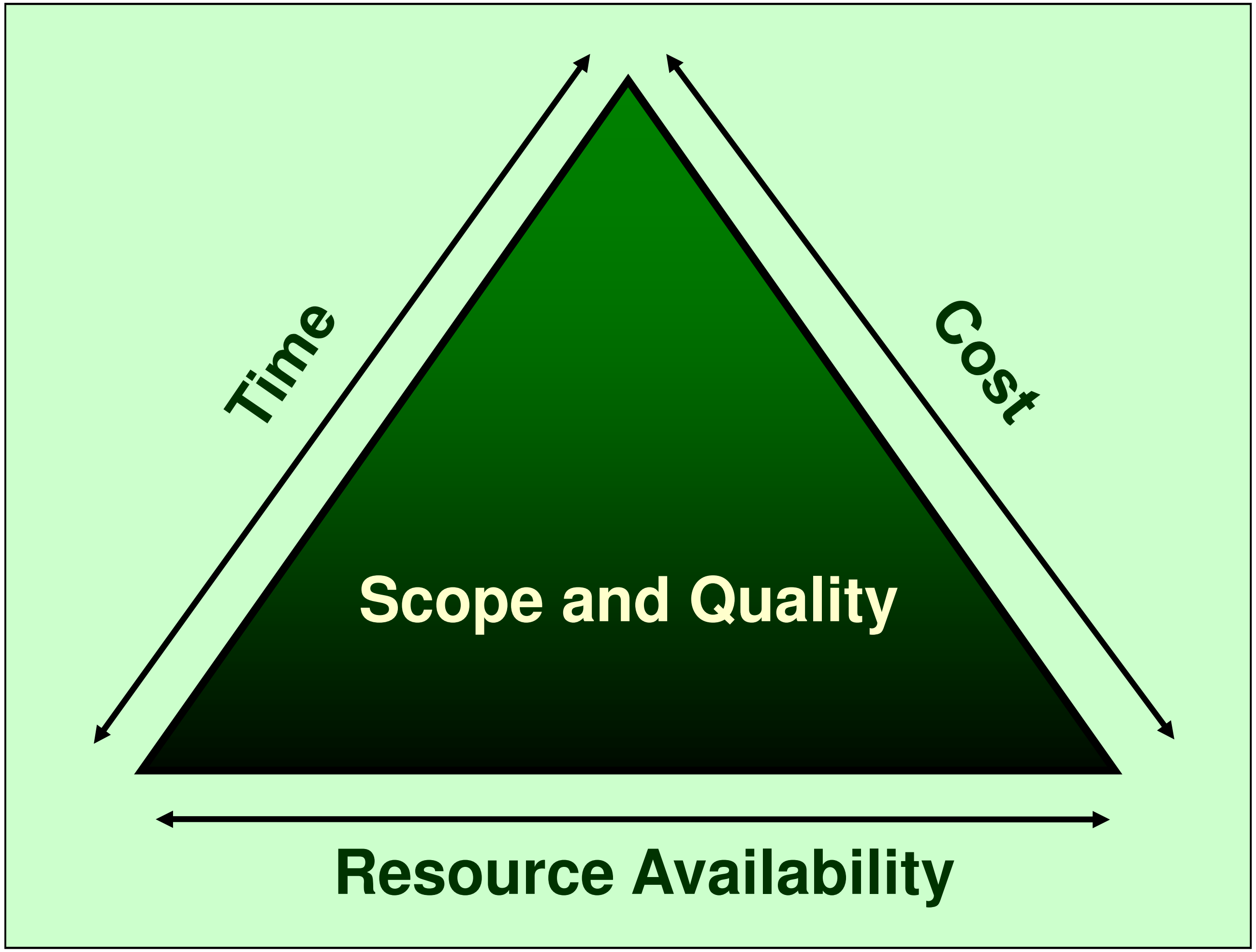
- Entire team or Task Managers for tasks open for work
- Everyone stands up
- Rotate the meeting facilitator
- Status of each task is reported
    - On schedule
    - Ahead of schedule (by how much)
    - Behind schedule (by how much and get well plan)
- Update Scope Bank
- Update Issues Log

Problem Management Meeting

- Affected parties only
- Agree on problem
- Agree on who owns the problem
- Brainstorm solutions
- Prioritize solutions
- Update Issues Log
- Schedule next meeting

Ch07: How to Monitor & Control a TPM Project

Problem Escalation Strategies – Who Controls What?



Time

Cost

Scope and Quality

Resource Availability

Problem Escalation Strategies

- Project Manager-Based Strategies
  - No action required. Problem will self-correct
  - Examine dependency relationships
  - Reassign resources
- Resource Manager-Based Strategies
  - Negotiate additional resources
- Client-Based Strategies
  - Negotiate multiple release strategies
  - Request schedule extension

Escalation Strategy Hierarchy

- No action required (schedule slack will correct the problem)
- Examines FS dependencies for schedule compression opportunities
- Reassign resources from non-critical path tasks to cover the slippage.
- Negotiate additional resources
- Negotiate multiple release strategies
- Request schedule extension from the client

Gaining approval to close the project

When the client is satisfied that the acceptance criteria have been met the project enters the closing phase

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch08: How to Close a TPM Project

Presented by
(facilitator name)

EII

Ch08: How to Close a TPM Project

Summary of Chapter 8

- Using tools, templates, and processes to close a project
- Writing & maintaining client acceptance procedures
- Closing a project
- Getting client acceptance
- Installing project deliverables
- Documenting the project
- Conducting the post-implementation audit
- Writing the final report
- Celebrating success

Ch07: How to Close a Project

Tools, Templates, & Processes Used to Close a Project

- Acceptance Test Procedure (ATP)
- Implementation strategies
- Project documentation
- Post-Implementation audit
- Final project report

Closing a Project

1. Getting client acceptance of deliverables.
2. Ensuring that all deliverables are installed.
3. Ensuring that all documentation is in place.
4. Getting client sign-off on the final report.
5. Conducting the post-implementation audit.
6. Celebrating success.

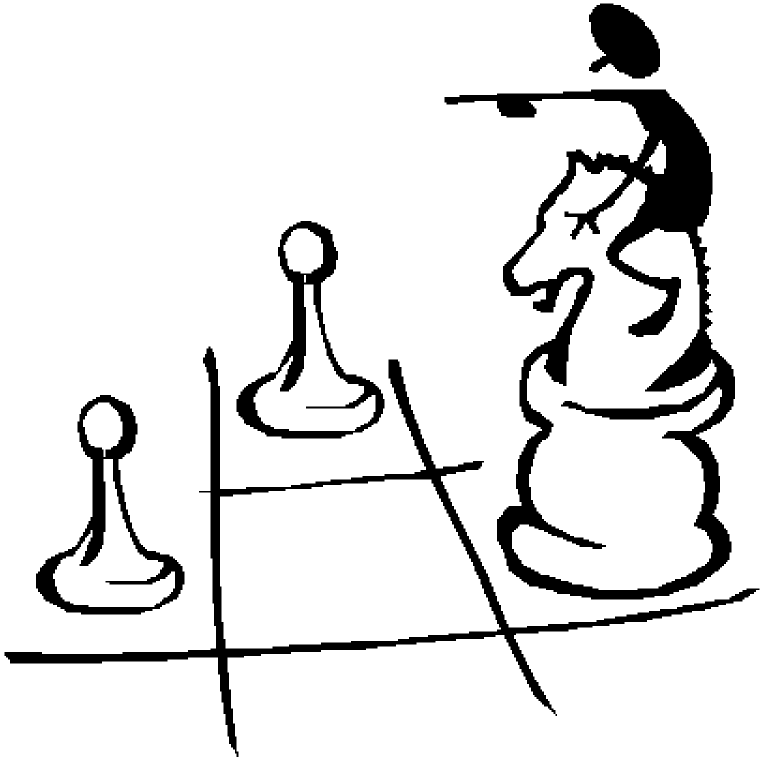
Why Do I Need Client Acceptance Procedures?

- Acceptance criteria must be clearly defined
- Criteria defined during project planning
- Avoid 11th hour disputes

1. **The criteria is defined in collaboration with the client.**
2. **The criteria is administered by the project team during final acceptance testing.**

Installing Project Deliverables

- Phased Approach
- Cut-Over Approach
- Parallel Approach
- By Business Unit Approach



Ch07: How to Close a Project

Documenting the Project

- Reference for future changes in deliverables
- Historical record for estimating duration and cost on future projects, activities, and tasks
- Training resource for new project managers
- Input for further training and development of the project team
- Input for performance evaluation by the functional managers of the project team members

Documenting the Project – The Project Notebook

- POS
- RBS and all revisions
- Proposal and backup data
- Original and revised project schedules
- Minutes of all project team meetings
- Copies of all status reports
- Design documents
- Copies of all change notices
- Copies of all written communications
- Outstanding issues reports
- Final report
- Sample deliverables (if appropriate)
- Client acceptance documents
- Post-implementation audit report

NOTE:
Start the project notebook
on the first day

Conducting the Post-Implementation Audit

- Was the project goal achieved?
  - Does it do what project team said it would?
  - Does it do what client said it would?
- Was the project work done on time, within budget, and according to specification?
- Was the client satisfied with the project results?
- Was business value realized?
  - Check success criteria
- What lessons were learned about your project management methodology?
- How well did the team follow the methodology?

Reasons for not doing a post-implementation audit

- Managers don’t want to know
- Managers don’t want to pay the cost
- It’s not a high priority
- There’s too much other scheduled work to do

Final Project Report

- Executive Summary
- Overall success and performance of project
- Organization and administration of project
- Techniques used to accomplish results
- Strengths and weaknesses of the approach
- Recommendations
- Appendices
  - POS
  - WBS
  - Resource Schedule
  - Change Requests
  - Final Deliverables
  - Other

Celebrating Success

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch09: Complexity and Uncertainty in the Project Management Landscape

Presented by
(facilitator name)

Summary of Chapter 9

- Understanding the complexity/uncertainty domain of projects
  - Requirements
  - Flexibility
  - Adaptability
  - Risk
  - Team Cohesiveness
  - Communications
  - Client Involvement
  - Specification
  - Change
  - Business Value

Contemporary Project Landscape

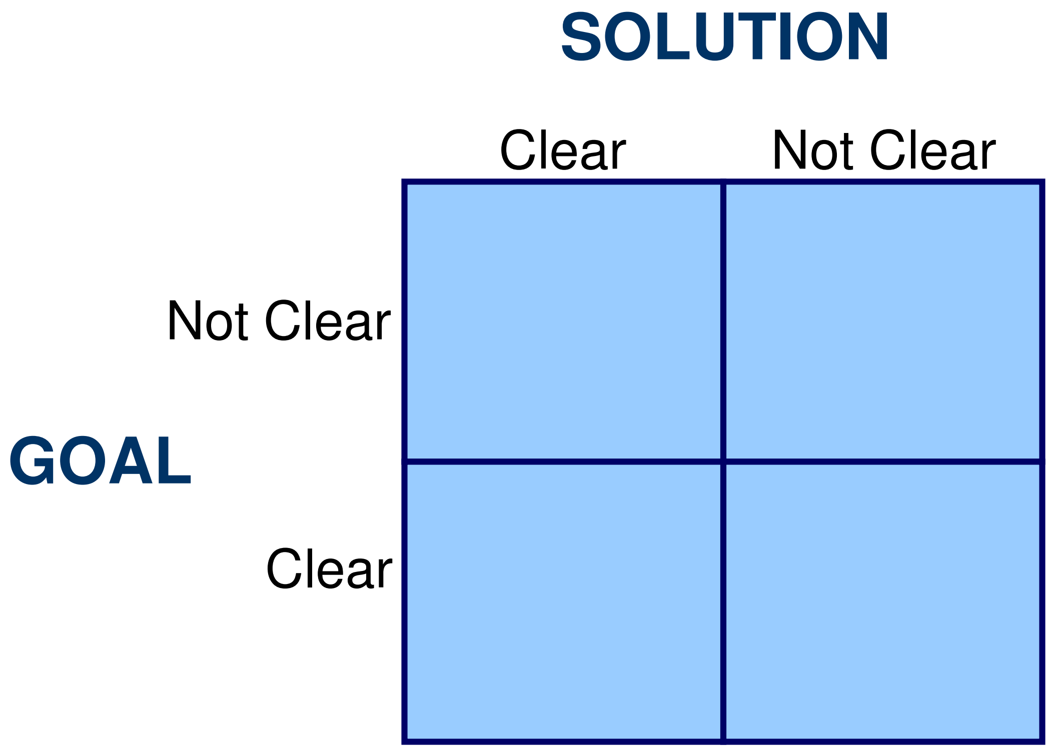
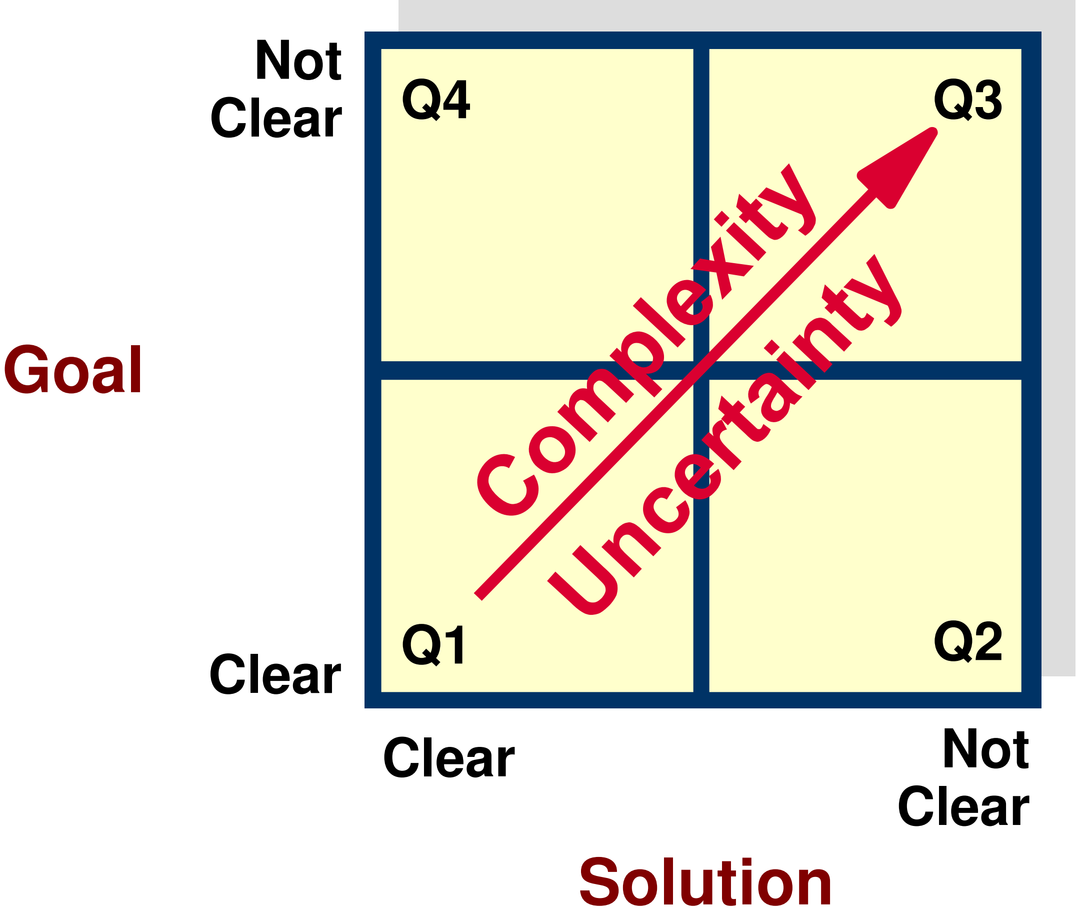


Figure 09-01

Non-Value-Added Work

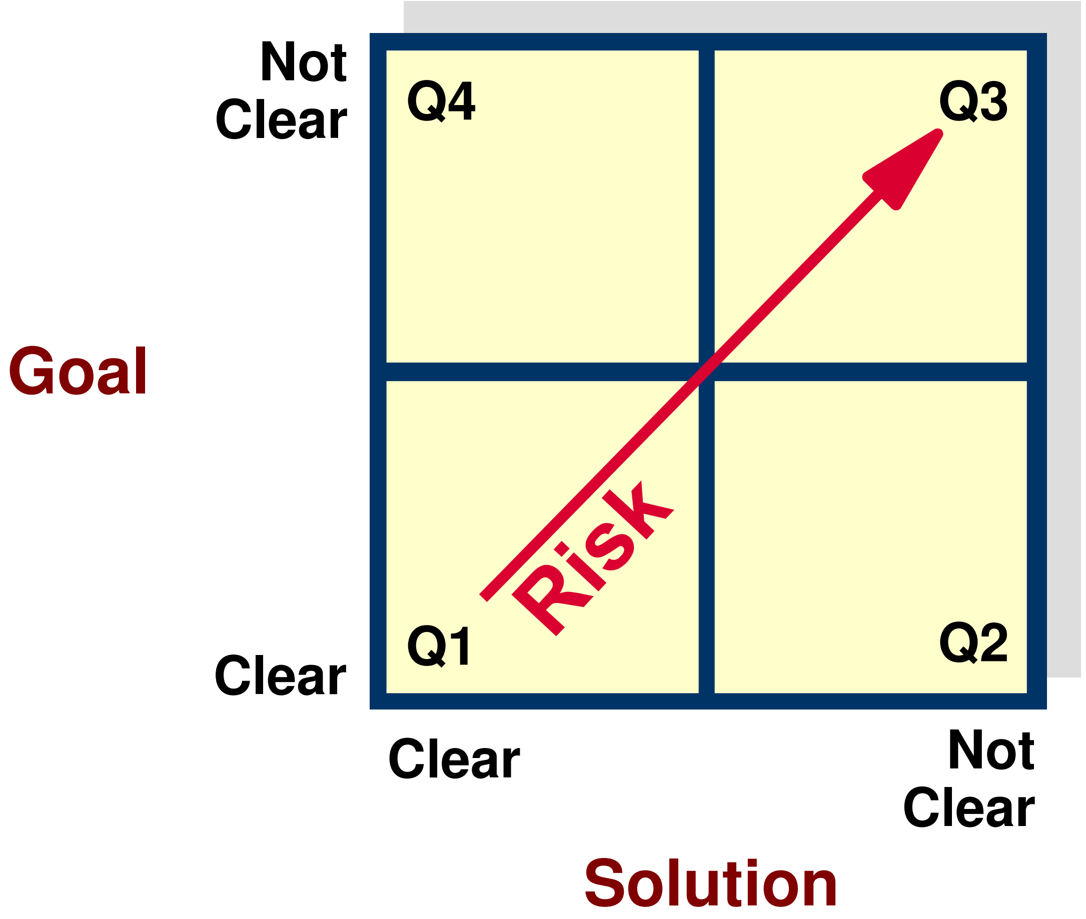
Non-value-added work involves the consumption of resources (usually people or time) on activities that do not add business value to the final product or process.

The Complexity/Uncertainty Domain

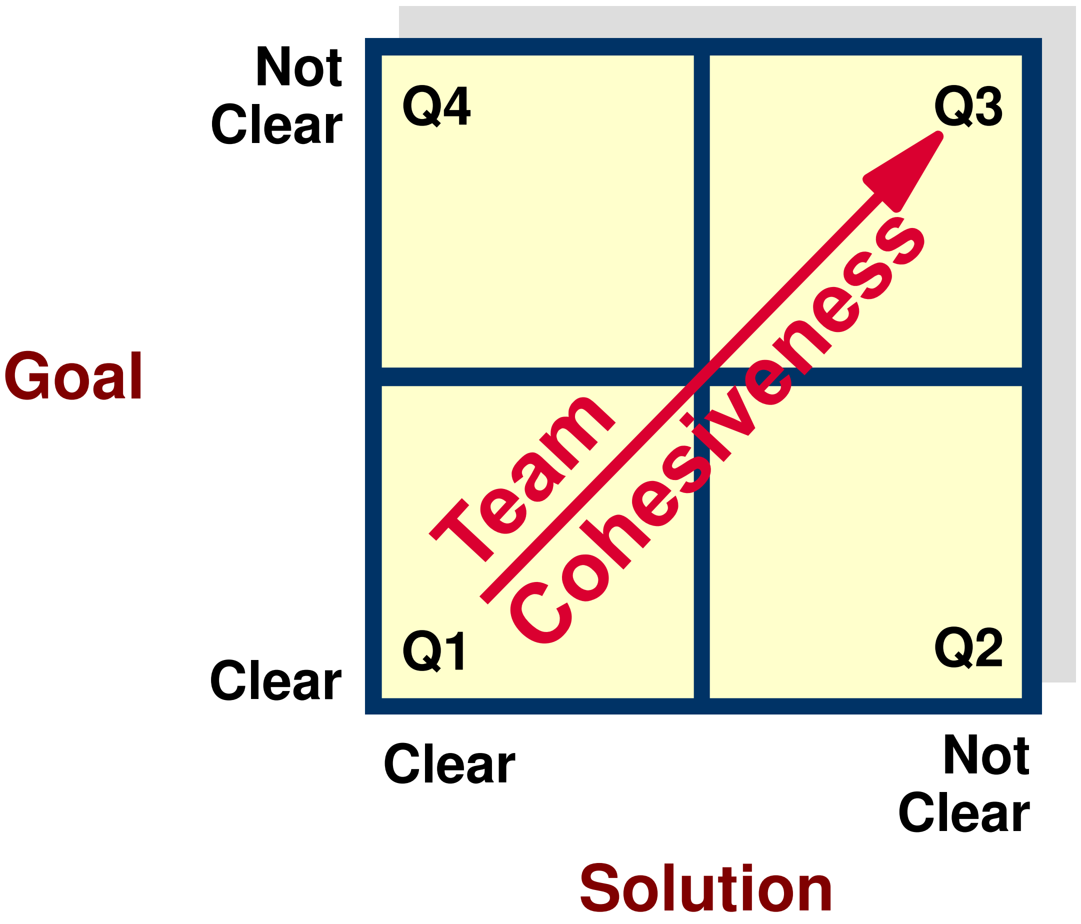


- ➢ Requirements
- ➢ Flexibility
- ➢ Adaptability
- ➢ Change

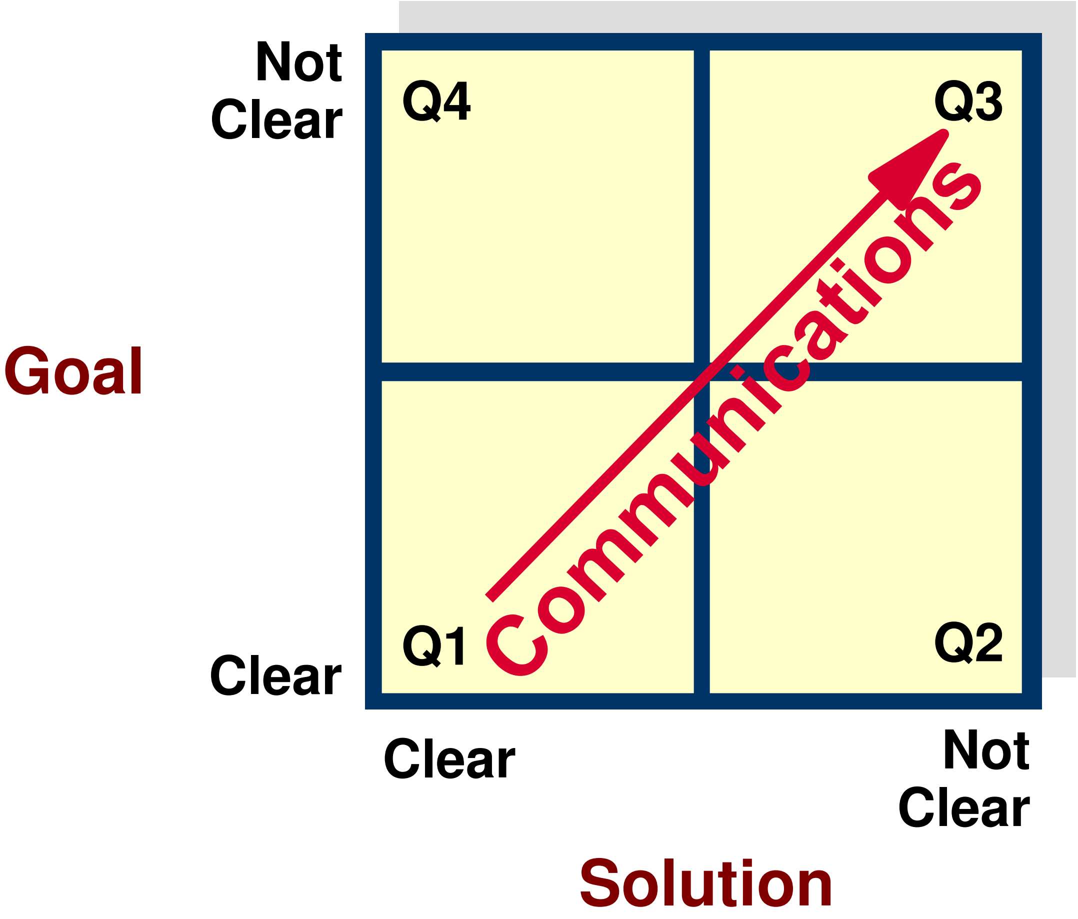
Risk


Not
Clear
Q4
Q3
Goal
Risk
Q1
Q2
Clear
Clear
Not
Clear
Solution

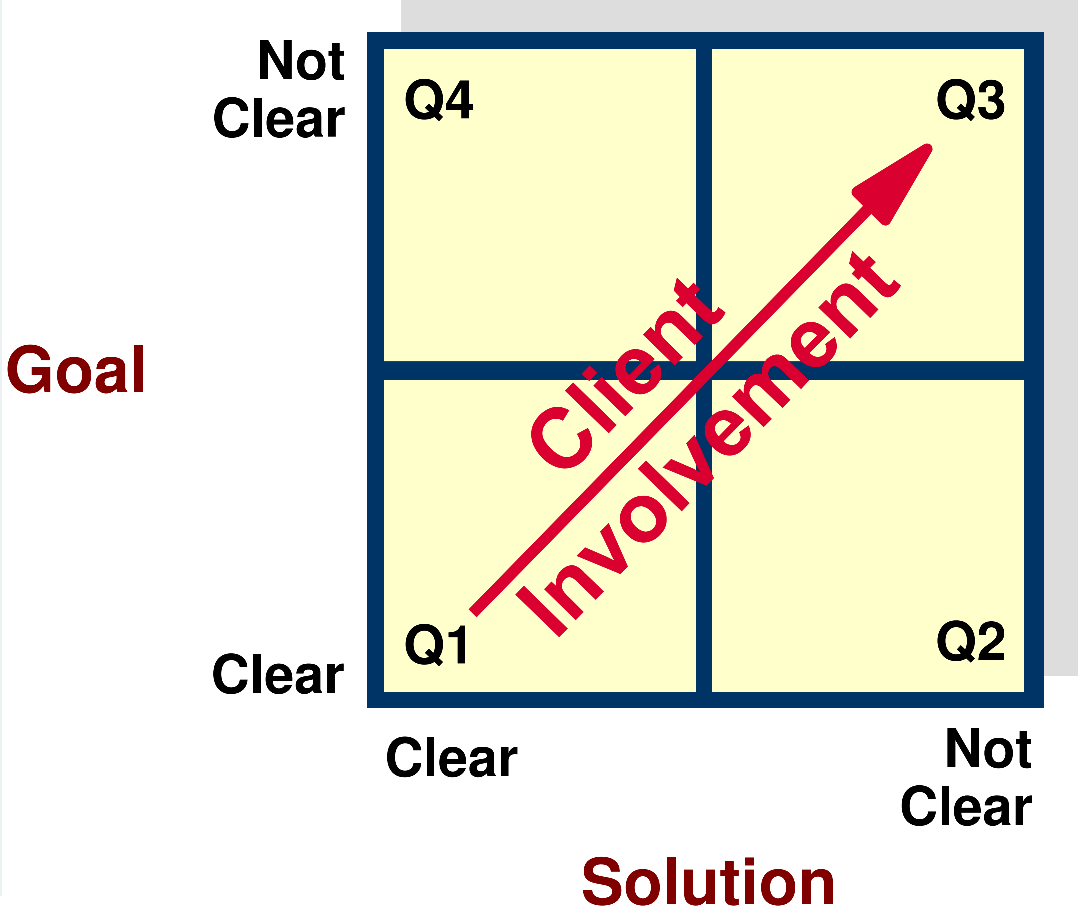
Team Cohesiveness



Communications



Client Involvement



Not Clear

Clear

Goal

Q4

Q3

Q1

Q2

Client Involvement

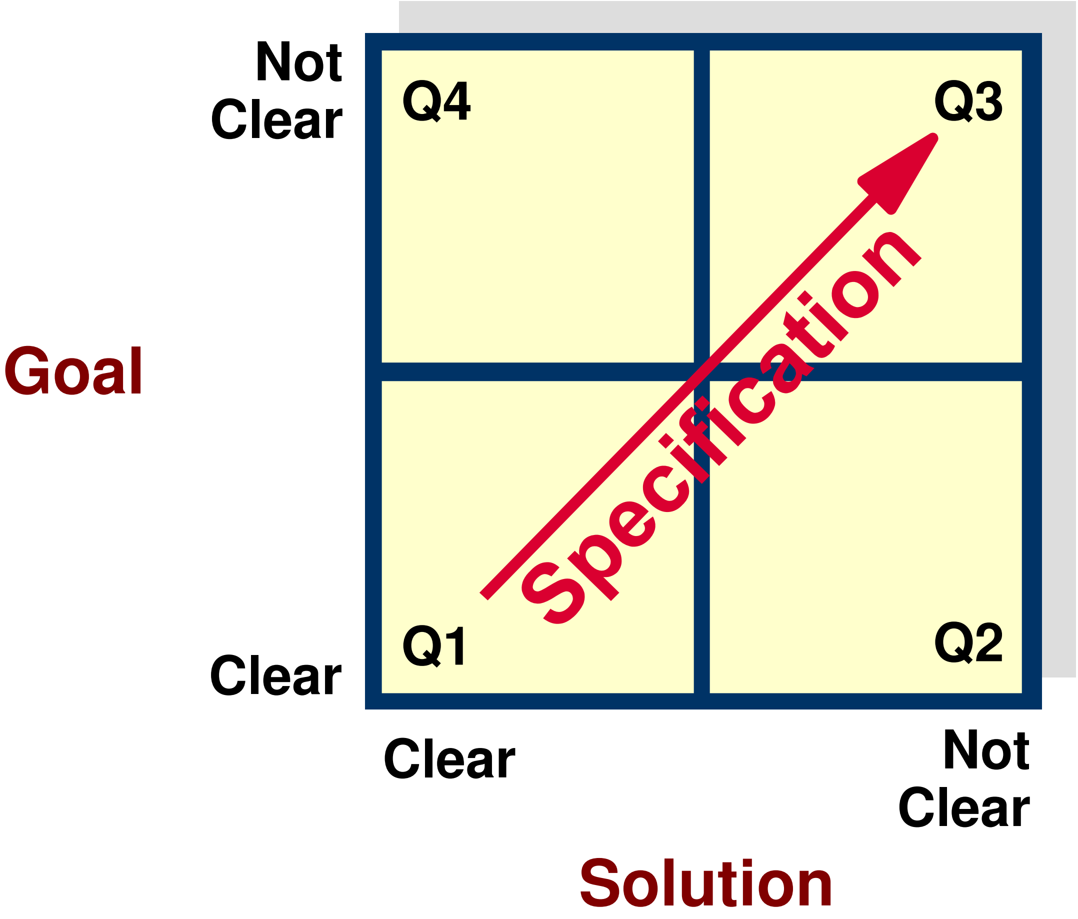
Clear

Not Clear

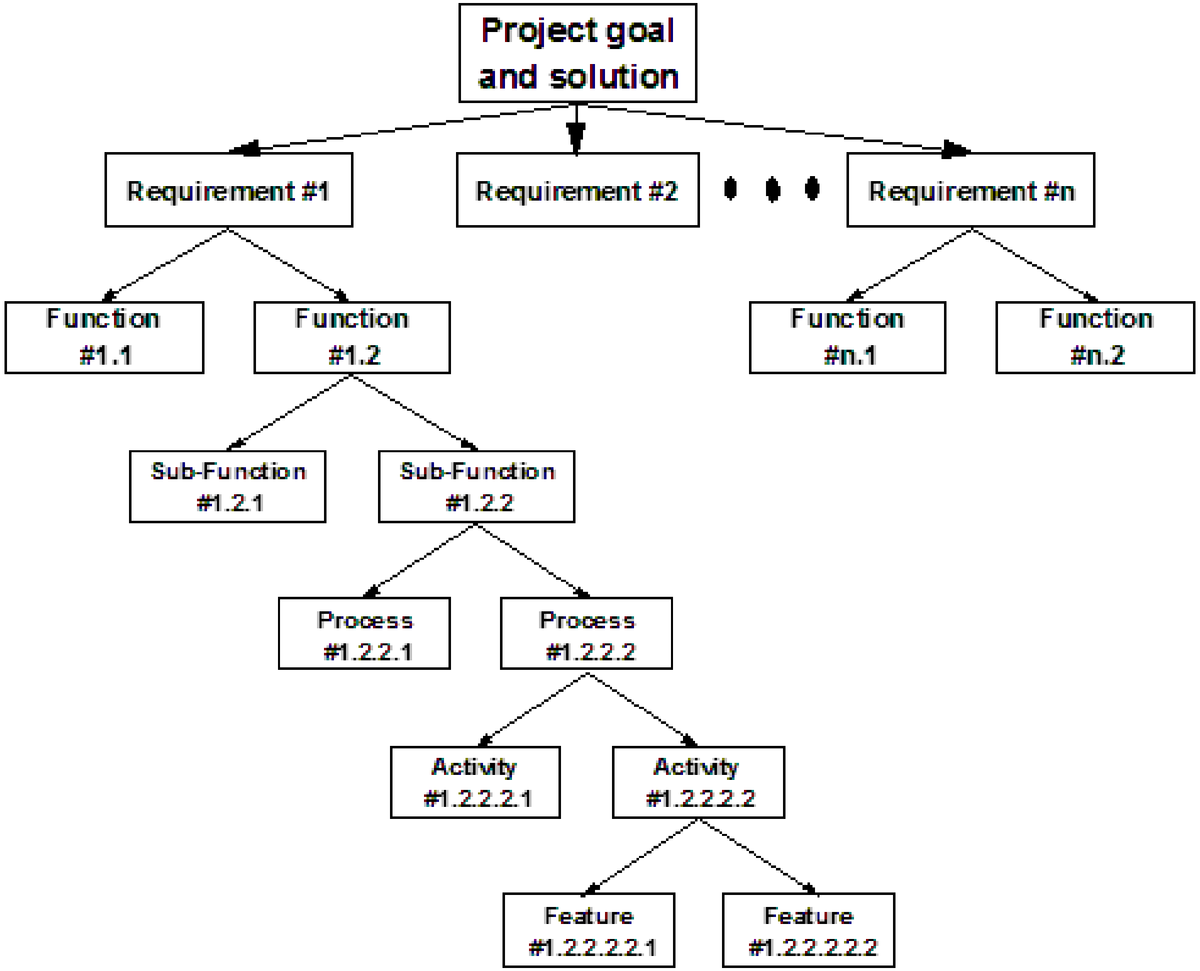
Solution

- ➢ Client comfort zone
- ➢ Ownership by the client
- ➢ Client sign-off

Specification



The Requirements Breakdown Structure



Project goal and solution

Requirement #1

Requirement #2

• • •

Requirement #n

Function #1.1

Function #1.2

Function #n.1

Function #n.2

Sub-Function #1.2.1

Sub-Function #1.2.2

Process #1.2.2.1

Process #1.2.2.2

Activity #1.2.2.2.1

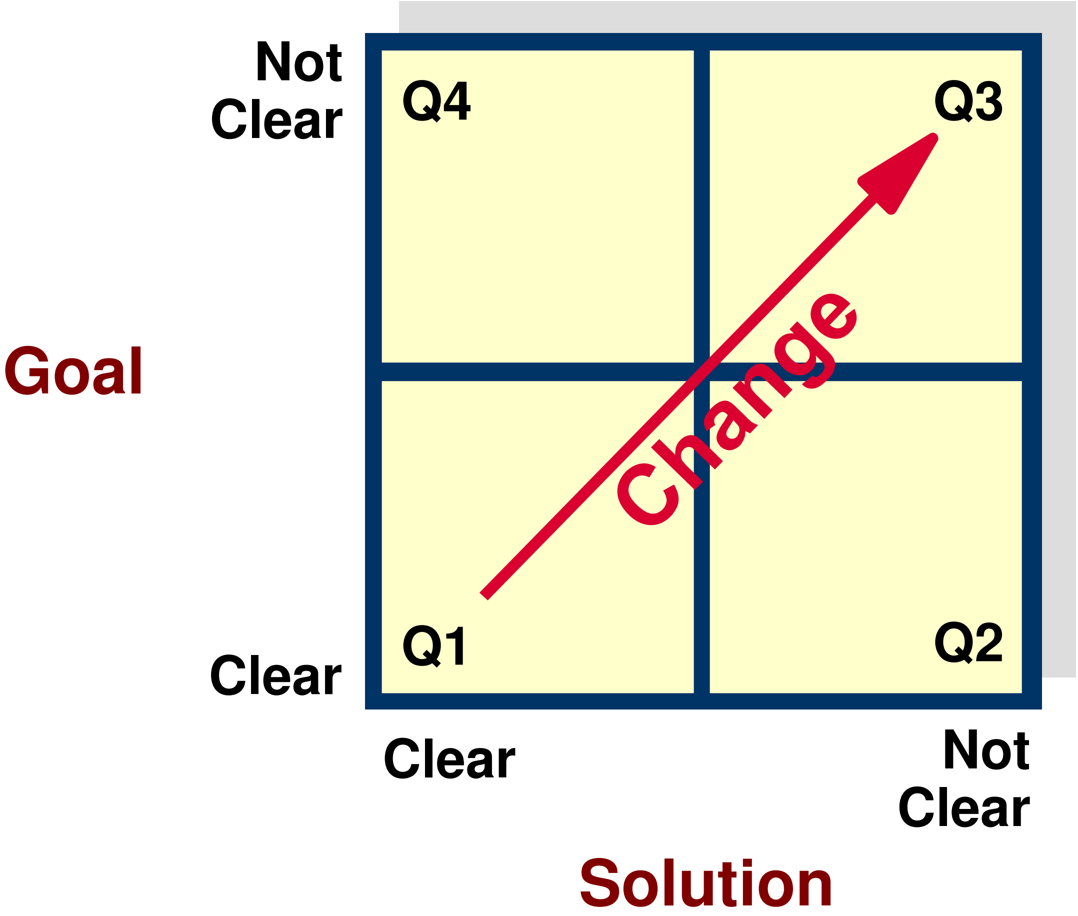
Activity #1.2.2.2.2

Feature #1.2.2.2.2.1

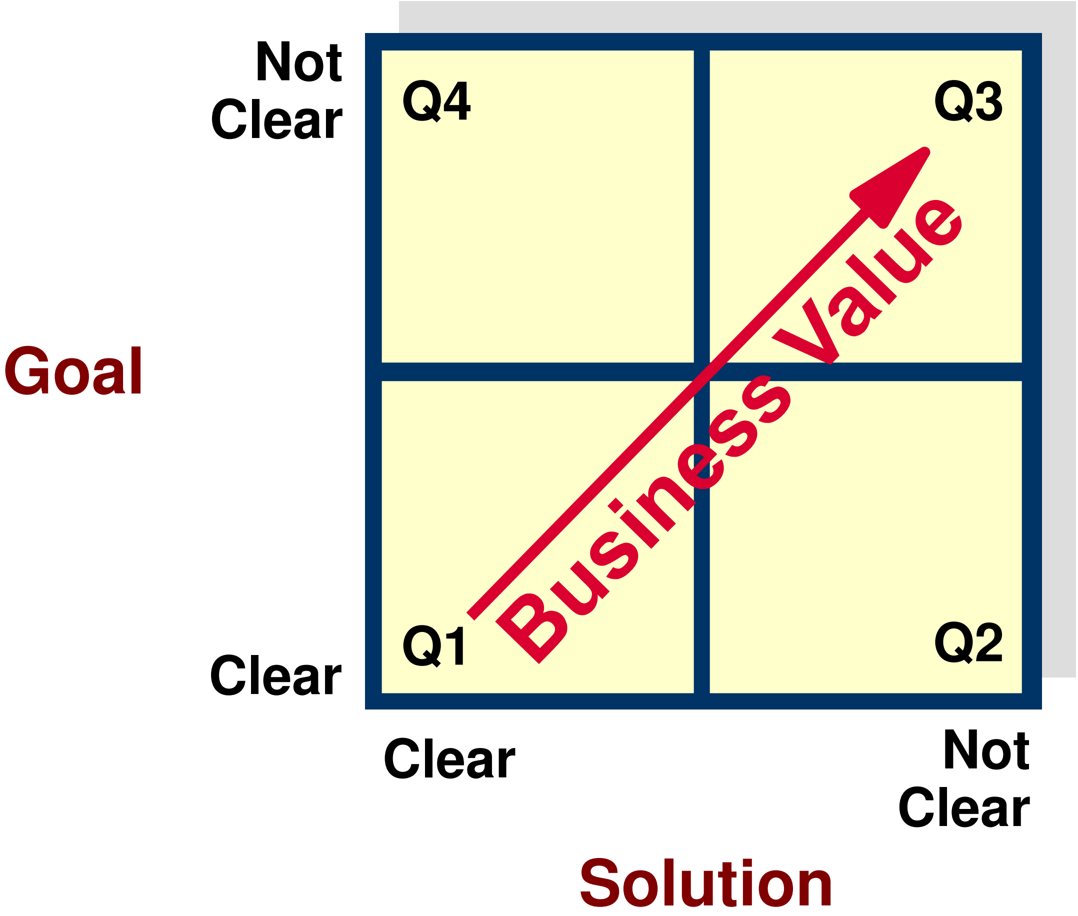
Feature #1.2.2.2.2.2

Figure 09-02

Change


Not Clear
Clear
Goal
Q4
Q3
Q1
Q2
Change
Clear
Not Clear
Solution

Business Value



Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch10: Traditional Project Management

Presented by
(facilitator name)

Ch10: Traditional Project Management

Summary of Chapter 10

- What is Traditional Project Management?
- Linear Project Management Life Cycle
- Incremental Project Management Life Cycle
- Using Critical Chain Project Management

What is Traditional Project Management (TPM)?

Traditional Project Management is a set of tools, templates, and processes for managing projects whose goal and solution are both clearly understood.

Linear Project Management Life Cycle (PMLC) Model

Definition

- A Linear PMLC model consists of a number of dependent phases that are executed in a sequential order with no feedback loops.
- The complete solution is not released until the final phase.

Linear

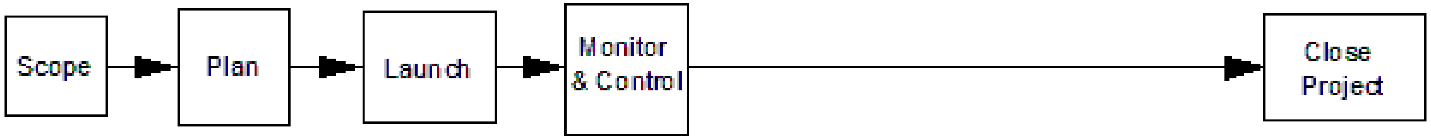


Figure 10-01

Linear PMLC Model

Characteristics

- Complete and clearly defined goal, solution, requirements, functions, and features
- Few expected scope change requests
- Routine and repetitive activities
- Use established templates

Linear

Linear PMLC Model

Routine and Repetitive Activities

- Build and use a library of templates
- Keep and post the history of lessons learned
- Keep a history of estimated and actual task durations
- Keep a history of risks, your mitigation plans, and the results

Templates

- Increases standard practices
- Provides learning modules for new project managers
- Establishes an archive of project artifacts
- Provides input for process and practice improvement programs

Linear PMLC Model

Linear

Strengths

- Entire project is scheduled up front
- Resource requirements are known
- Does not require the most skilled resources
- Team members do not have to be co-located

Linear PMLC Model

Weaknesses

- Does not accommodate change very well
- Costs too much
- Takes too long before any deliverables are produced
- Requires complete and detailed plans
- Must follow a rigid sequence of processes
- Is not focused on client value

Linear

Linear PMLC Model

When to use a Linear Approach

- Projects that are repetitive
- Simple, short duration projects
- Projects contained totally within a single department and use no outside resources

Linear

Variations to the Linear PMLC Model

- Rapid Linear PMLC Model

Linear

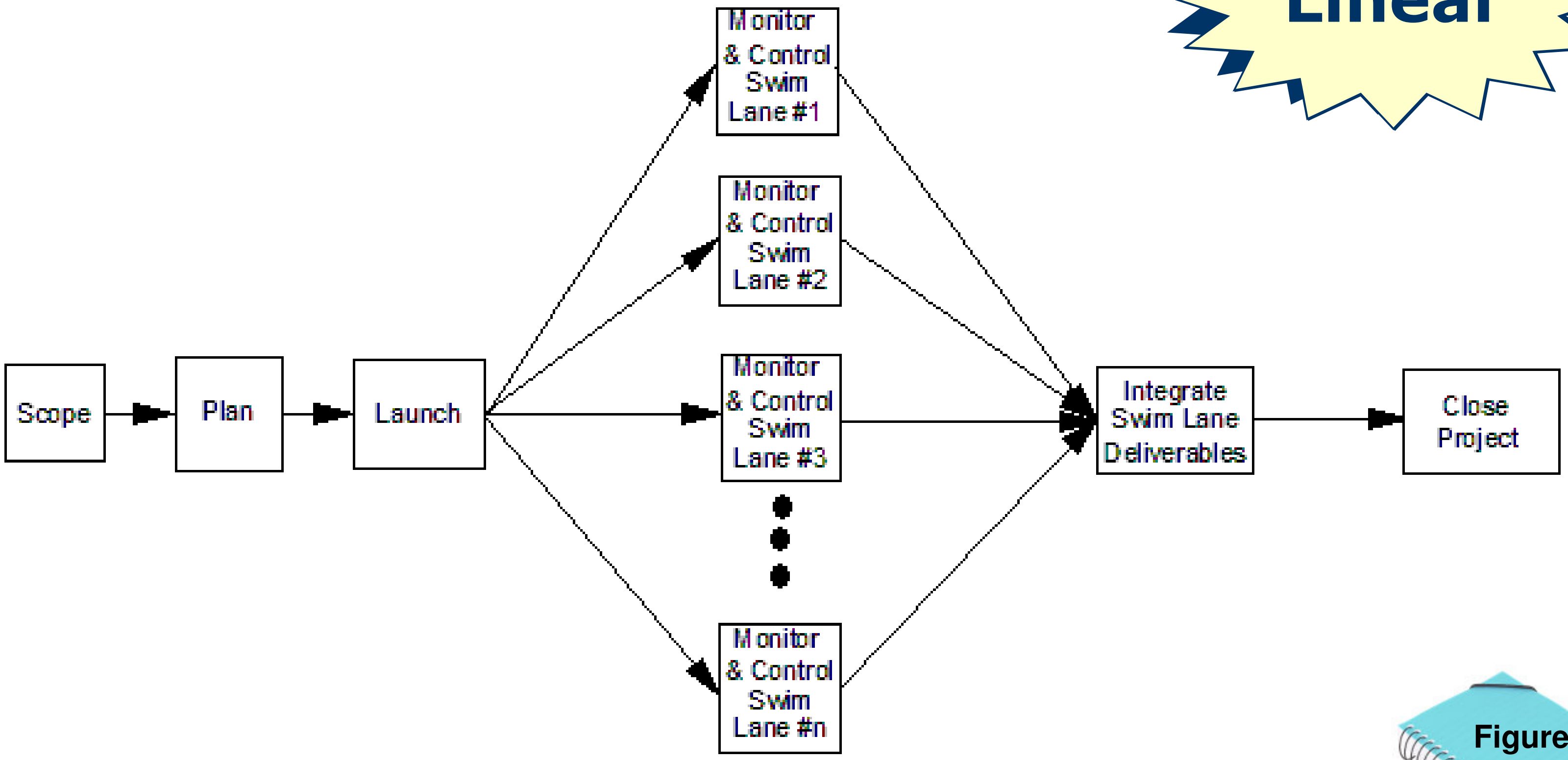

Scope
Plan
Launch
Monitor & Control Swim Lane #1
Monitor & Control Swim Lane #2
Monitor & Control Swim Lane #3
Monitor & Control Swim Lane #n
Integrate Swim Lane Deliverables
Close Project

Figure 10-02

Variations to the Linear PMLC Model

- Feature-Driven Development Linear PMLC Model

Linear

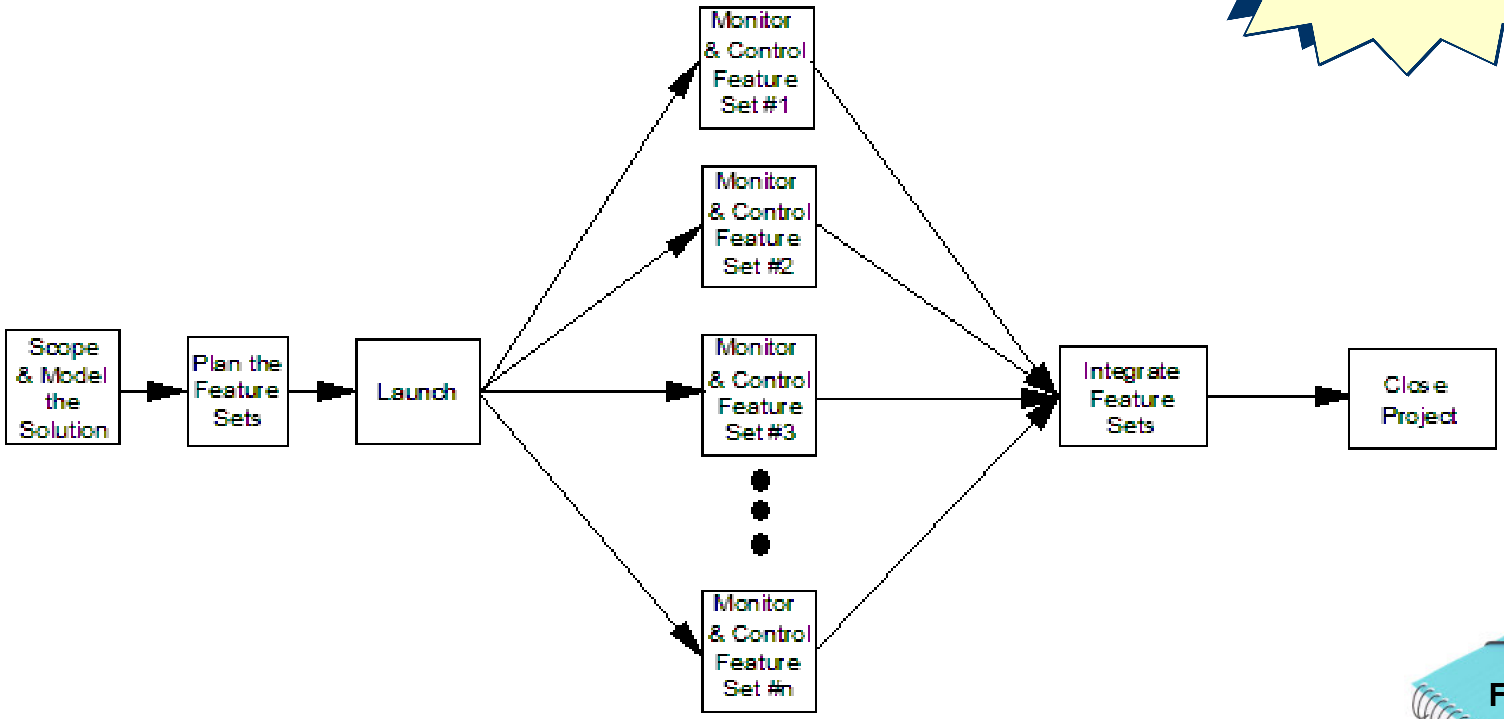

Scope & Model the Solution
Plan the Feature Sets
Launch
Monitor & Control Feature Set #1
Monitor & Control Feature Set #2
Monitor & Control Feature Set #3
Monitor & Control Feature Set #n
Integrate Feature Sets
Close Project

Figure 10-03

Linear PMLC Model

Linear

Considerations in choosing a variation

- Decomposing the project into parallel and independent swim lanes
- Swim lane cohesiveness
- Increased risk

Linear PMLC Model

Linear

Adapting & Integrating the Toolkits for Maximum Effectiveness

- The functions and features of a swim lane can be built independently of the functions and features of any other swim lane
- There are no resource dependencies across swim lanes
- There are no schedule dependencies across swim lanes
- The total duration of each swim lane must be nearly equal

Incremental PMLC Model

Incremental

Definition

- An Incremental PMLC Model consists of a number of dependent phases that are repeated in sequential order with no feedback loops. Each phase releases a partial solution.

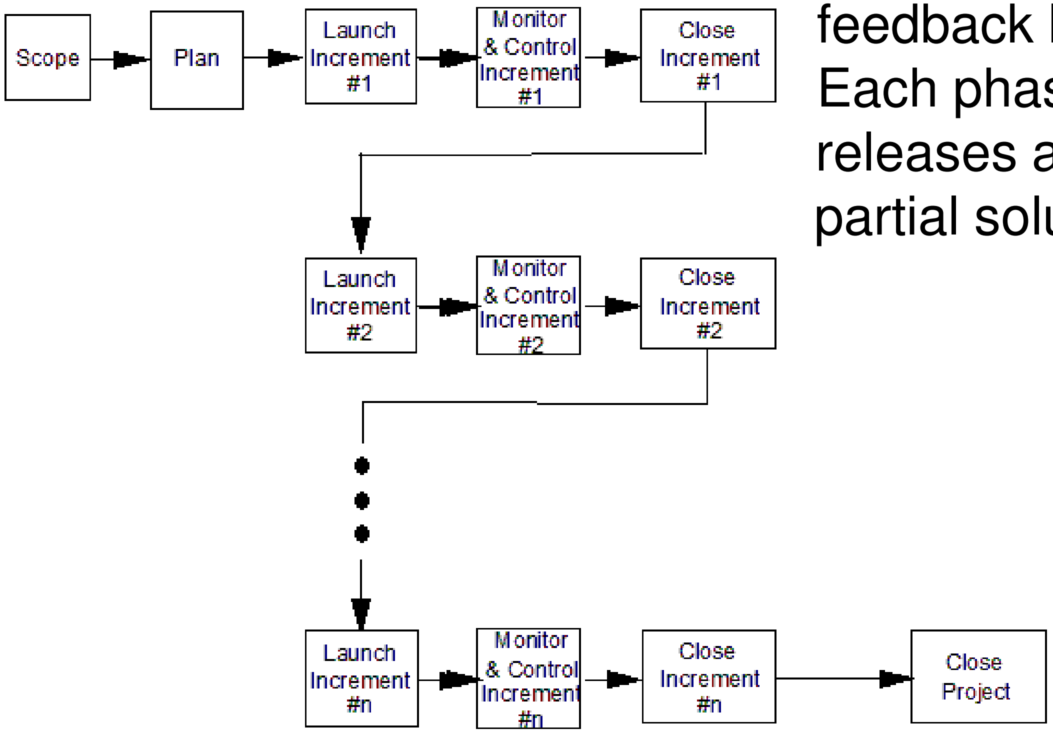


Figure 10-04

Incremental PMLC Model

Characteristics

- Same as Linear PMLC Model
- Need to release deliverables against a more aggressive schedule

Incremental

Incremental PMLC Model

Incremental

Strengths

- Produces business value early in the project
- Enables you to better schedule scarce resources
- Can accommodate minor scope change requests between increments
- Offers a product improvement opportunity
- More focused on client value than the Linear PMLC model

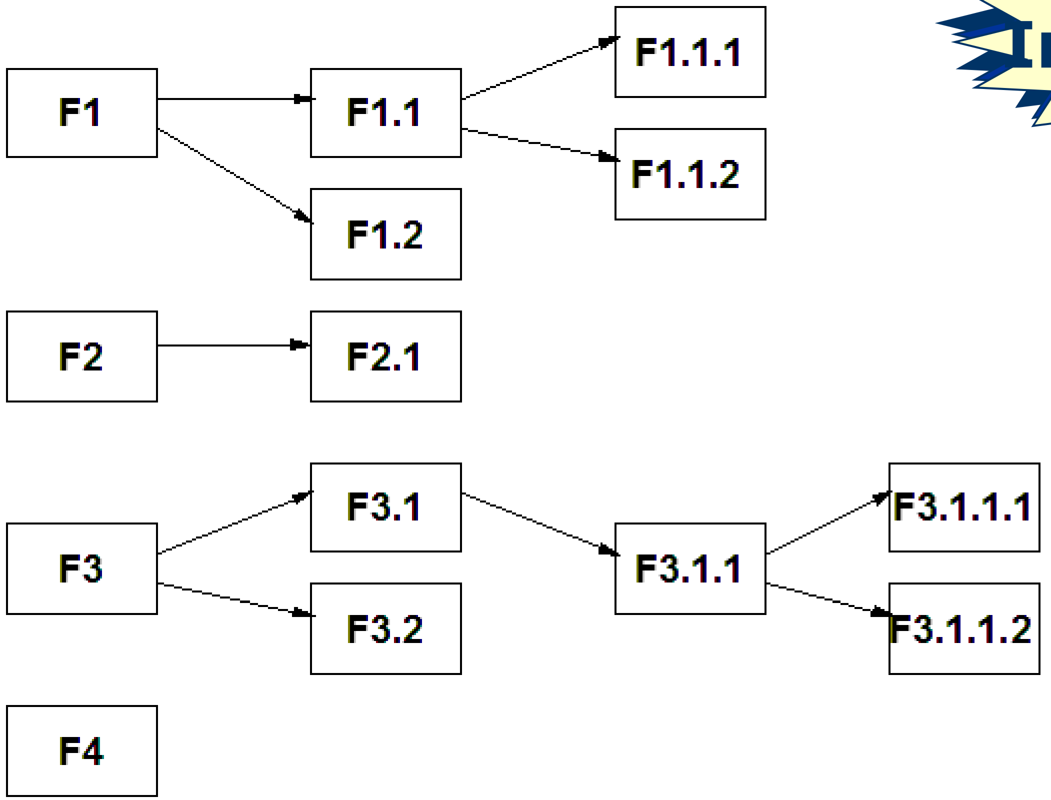
Incremental PMLC Model

Incremental

Weaknesses

- The team may not remain intact between increments
- Requires hand-off documentation between increments
- Must follow a defined set of processes
- Must define increments based on function and feature dependencies rather than business value
- Requires more client involvement than Linear PMLC models
- An Incremental PMLC model takes longer than the Linear PMLC model
- Partitioning the functions and features may be problematic

Incremental PMLC Model



Incremental

Figure 10-05

Incremental PMLC Model

When to use an Incremental PMLC Model

- To get to a partial product or service to market sooner
- To get partial solution to the end user sooner

Incremental

Incremental PMLC Model

Incremental

Adapting & Integrating the Toolkits for Maximum Effectiveness

- An increase in management time to handle increment issues
- An increase in the total amount of work as compared to the Linear PMLC model
- The likelihood of between increment scope change requests
- An increased likelihood of losing resources between increments
- The possibility of project delays between increments
- Potential for overlooking increment dependencies
- Handoff documentation of requirements between increments

What is the Critical Chain?

The critical chain is the longest duration path through the project, if you consider both task dependencies and resource constraints

Variation in Duration

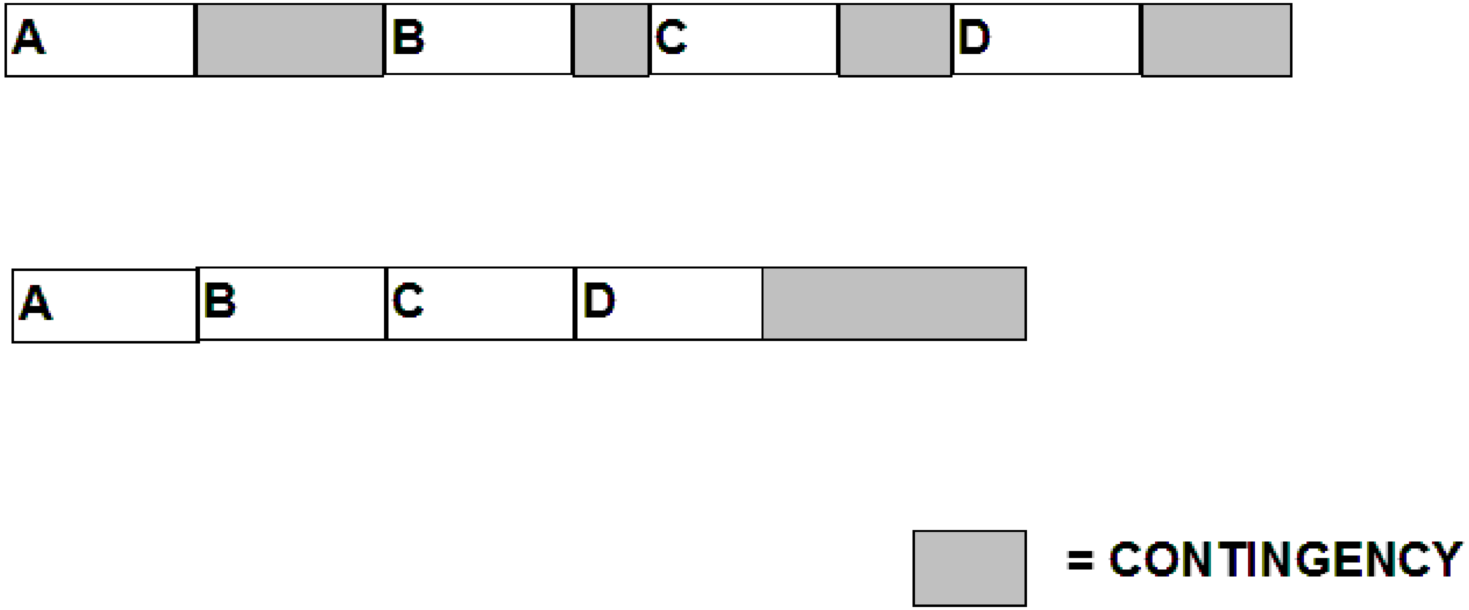
- **Common cause variation**

  The natural variation due to the capacity of the system to repeat itself

- **Special cause variation**

  Variation due to the circumstances under which the event occurs

Using Contingency to Reduce project time



▨ = CONTINGENCY

Figure 10-06

The Early Schedule

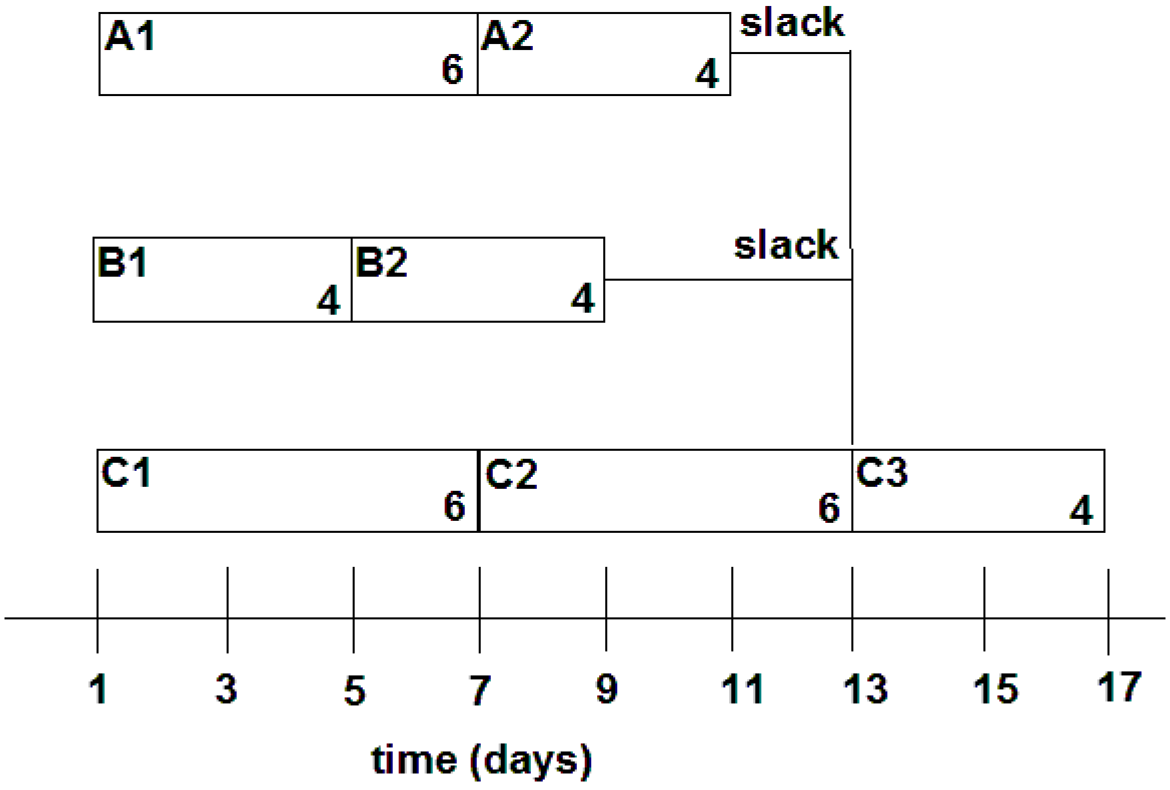


Figure 10-07

The Late Schedule with Resource Assignments

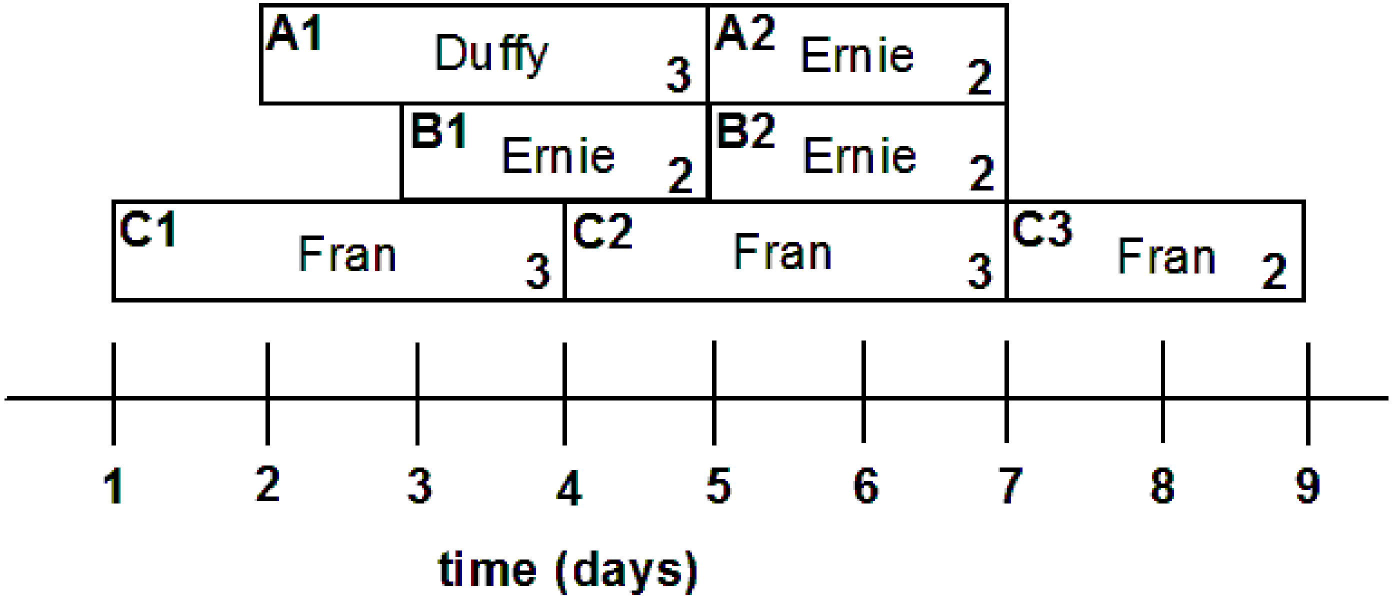


Figure 10-08

One Way to Resolve the Resource Conflict

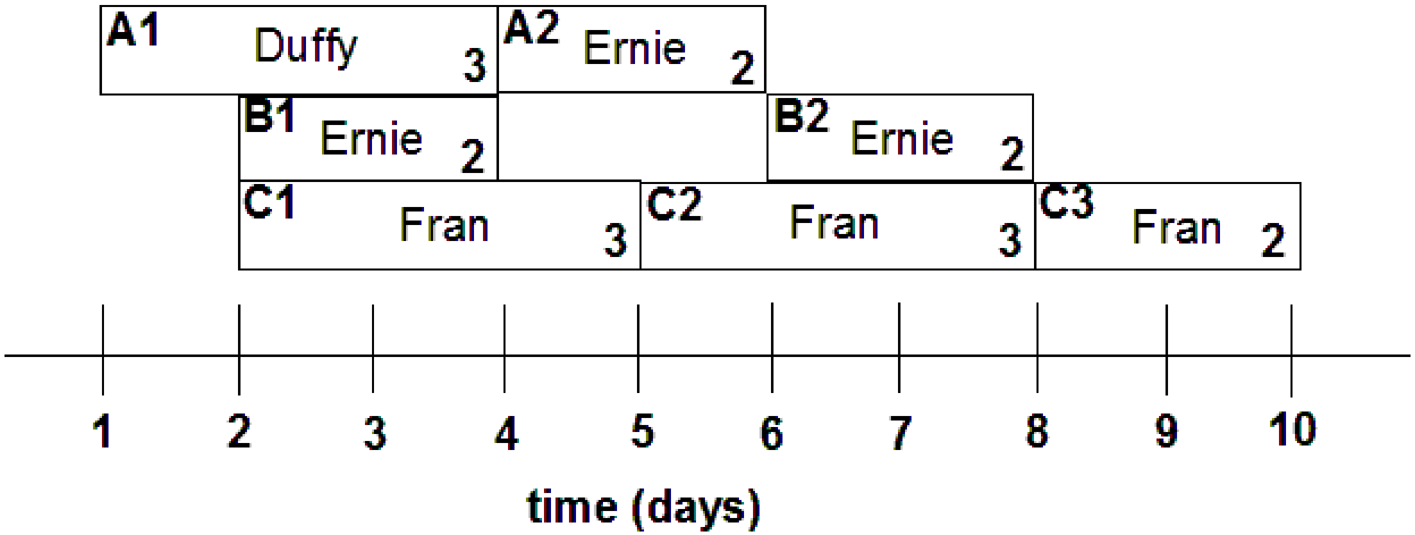


Figure 10-09

Another Way to Resolve the Resource Conflict

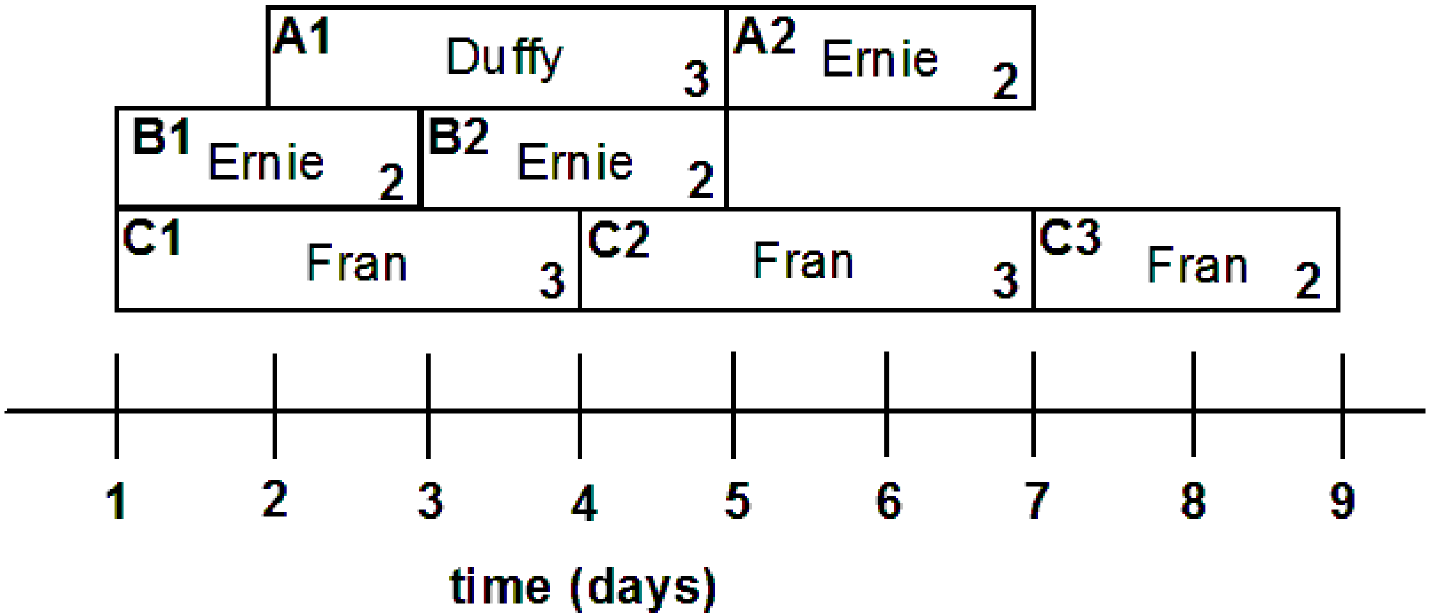


Figure 10-10

Buffers

Buffers are segments of time that are placed at the end of a sequence of tasks for the purpose of protecting the schedule of those tasks

- Project Buffers
- Feeding Buffers
- Resource Buffers

Buffer Penetration and Action Decisions

		Buffer penetration		
		first third	second third	final third
Task sequence penetration	first third	NO ACTION	serious problem immediate action required	a very serious problem exists aggressive action is needed
	second third	NO ACTION	define the problem and formulate a solution	serious problem implement the solution
	final third	task sequence will be ahead of schedule	NO ACTION	monitor the situation for any further penetration

Figure 10-11

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch11: Agile Project Management

Presented by
(facilitator name)

Summary of Chapter 11

- What is Agile Project Management?
- Iterative project management life cycle
- Adaptive project management life cycle
- Adapting and integrating the APM toolkit

What is Agile Project Management ?

Agile Project Management is a set of tools, templates, and processes for managing projects whose goal is clearly known but whose solution ranges from partially unknown to almost totally unknown.

The Agile Manifesto

"We are uncovering better ways of developing [products] by doing it and helping others do it. Through this work we have come to value:

Individuals and interactions over processes and tools
Working [products] over comprehensive documentation
Customer collaboration over contract negotiations
Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more."

Martin Fowler & Jim Highsmith, "The Agile Manifesto." Software Development Vol. 9, No. 8 (August 2001) pgs 28-32

Implementing Agile Projects

- Fully supported production versions of partial solutions are released to the end user quarterly or semi-annually
- Intermediate versions are released to a focus group every 2-4 weeks
- Co-located agile project teams
- Cross project dependencies
- Project portfolio management

Iterative Project Management Life Cycle Model

Definition

An Iterative project management life cycle (PMLC) model consists of a number of phases that are repeated in groups with a feedback loop after each group is completed. At the discretion of the client the last phase in a group may release a partial solution.

Iterative

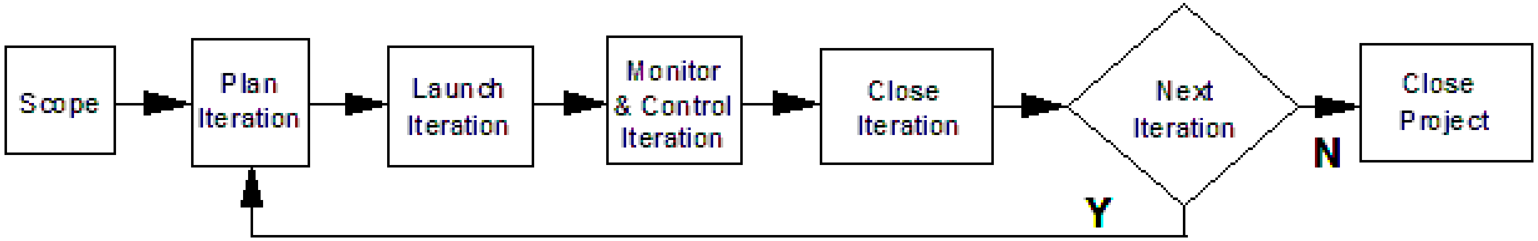


Figure 11-01

When to use an Iterative PMLC Model

Iterative

- Most but not all of the solution is clearly known
- You might otherwise have chosen the Incremental PMLC model but have a strong suspicion that there will be more than a minimum number of scope change requests
- You might otherwise have chosen an Adaptive PMLC model but are concerned about lack of client involvement

Iterative PMLC Model

Iterative

- Scope Phase
  - Implementation of intermediate solutions can be problematic
  - Final solution cannot be defined at the start of the project
- Plan Phase
  - The complete plan for building the known solution
  - The partial plan for the high priority functions

Iterative PMLC Model

- Launch Phase

Iterative

Characteristics	TPM project team	APM project team
Size	Could be very large	Usually less than 15
Skill Level	All levels	Most skilled
Location	Co-located or distributed	Co-located
Experience level	Junior to senior	Senior
Position responsibility	Requires supervision	Unsupervised

- Monitor & Control Phase
- Close Phase

Table 11-01

Iterative PMLC Model

Iterative

Characteristics

- The solution is known but not to the expected depth (i.e., features are not complete)
- Often uses iconic or simulated prototypes to discover the complete solution

Iterative PMLC Model

Iterative

Strengths

- Client can review current partial solution for suggested improvements
- Scope changes can be processed between iterations
- You can adapt it to changing business conditions

Iterative PMLC Model

Iterative

Weaknesses

- Requires a more actively involved client than Linear and Incremental PMLC models require
- Requires co-located teams
- Implementation of intermediate solutions can be problematic
- Final solution cannot be specified at the start of the project

Iterative PMLC Model

Iterative

Types of Iterative PMLC Models

- Prototyping
- Rational Unified Process (RUP)

Types of Iterative PMLC Models

Prototyping

Iterative

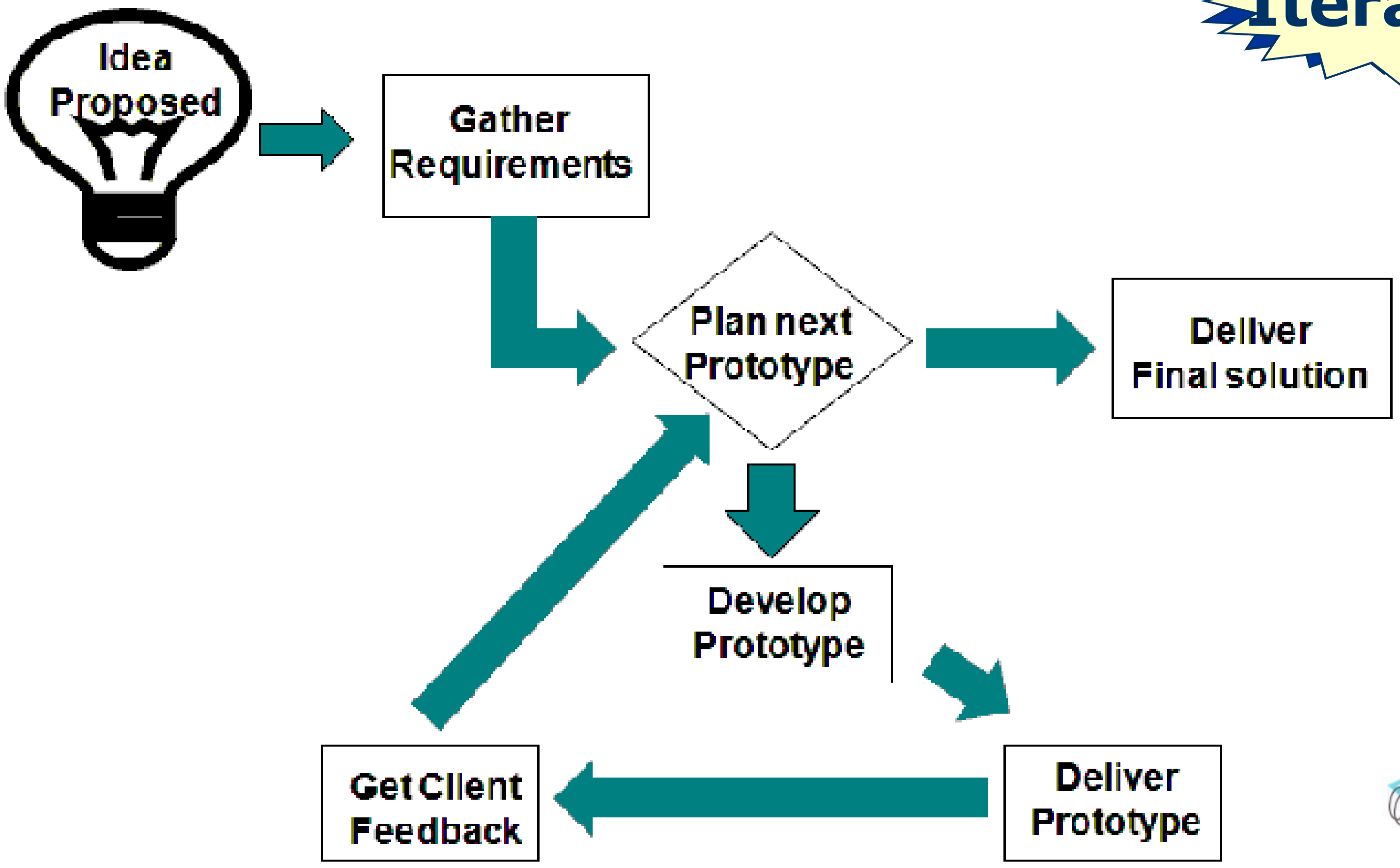


Figure 11-02

Types of Iterative PMLC Models

Prototyping mapped to Iterative PMLC Model

Iterative

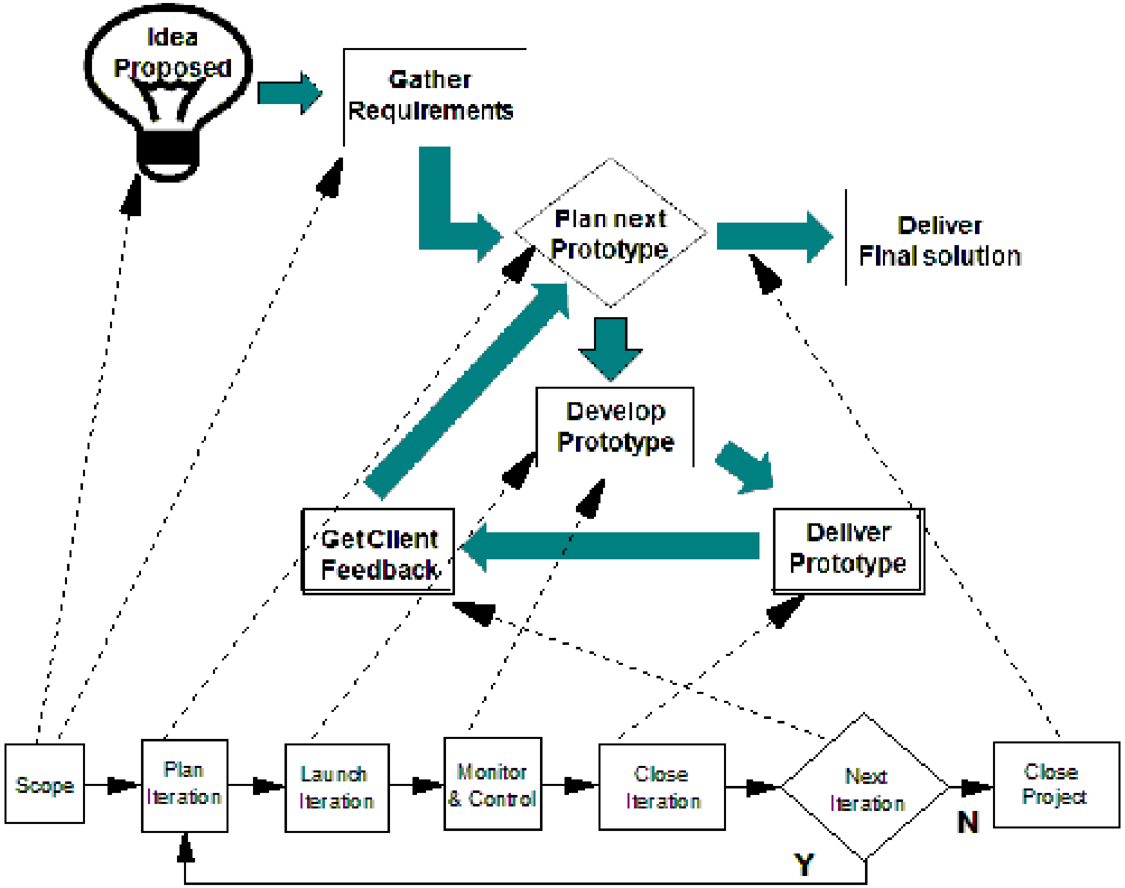


Figure
11-03

Types of Iterative PMLC Models

RUP

Iterative

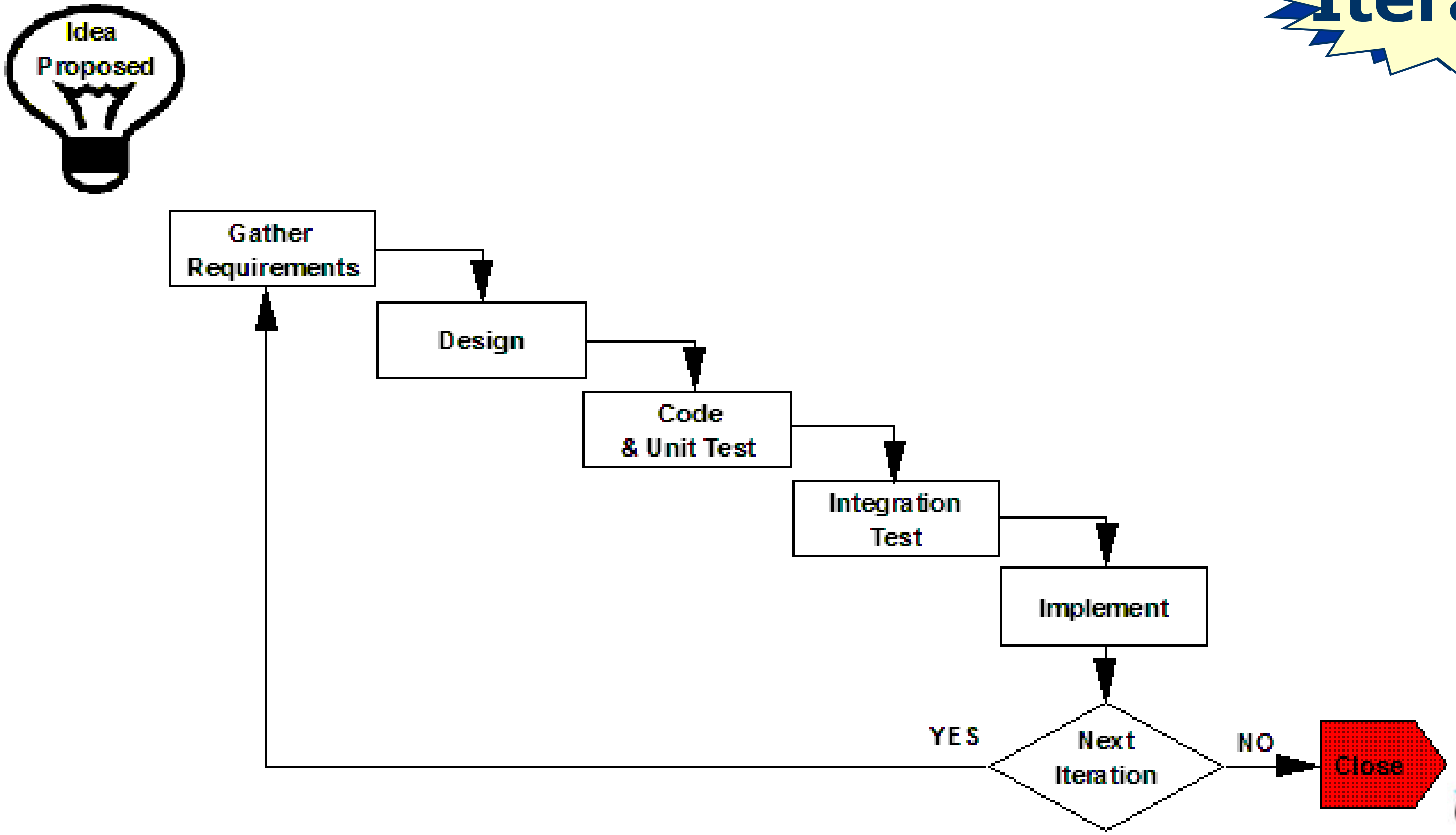


Figure
11-04

Types of Iterative PMLC Models

RUP mapped to Iterative PMLC Model

Iterative

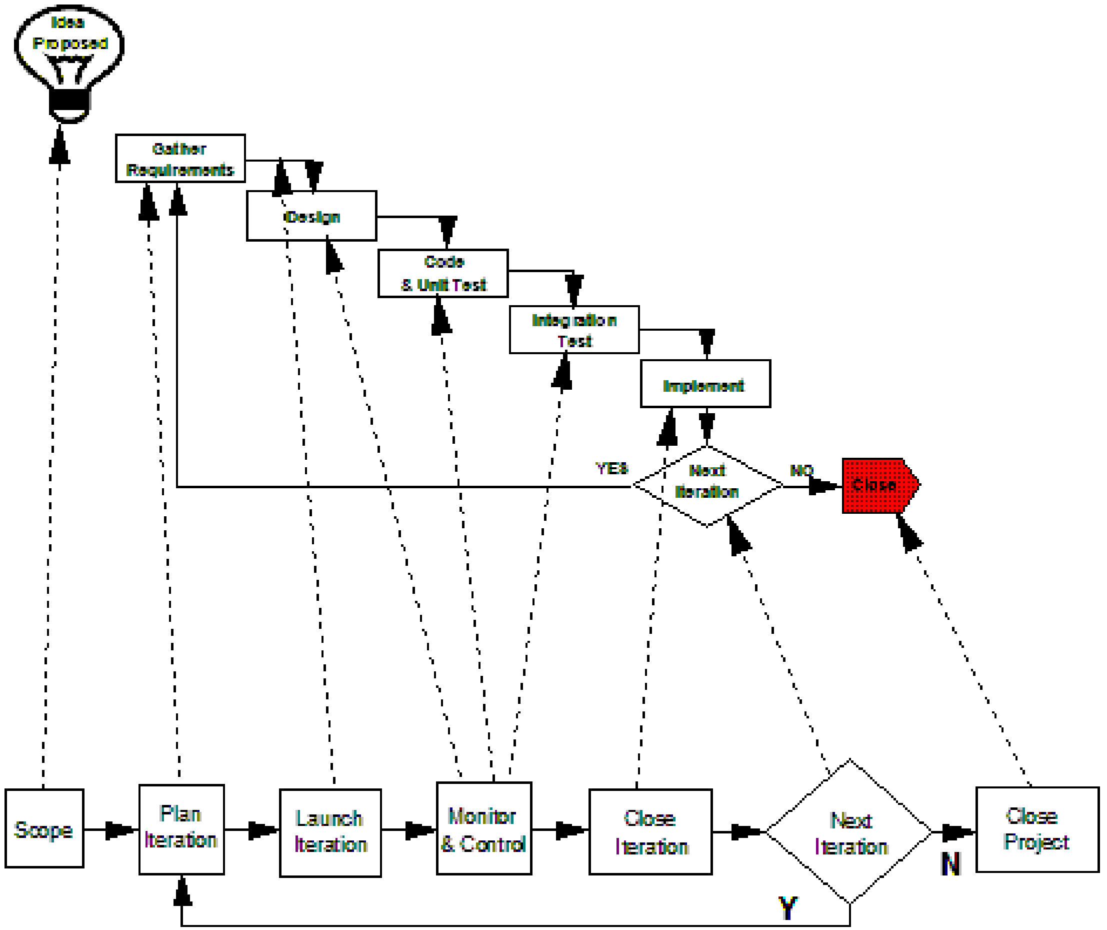


Figure 11-05

Iterative PMLC Model

Iterative

When to Use an Iterative PMLC Model

- Intuitive to the client
- Easily engage the client
- Immediate feedback on the effect of solution changes
- Tolerant of assessing and evaluating the impact of alternatives
- No fixed deadline for completion

Adaptive Project Management Life Cycle Model

Adaptive

Definition

Adaptive PMLC Models are those that proceed from iteration to iteration based on very limited specification of solution. Each iteration learns from the proceeding ones and redirects the next iteration in an attempt to converge on an acceptable solution. At the discretion of the client an iteration may release a partial solution.

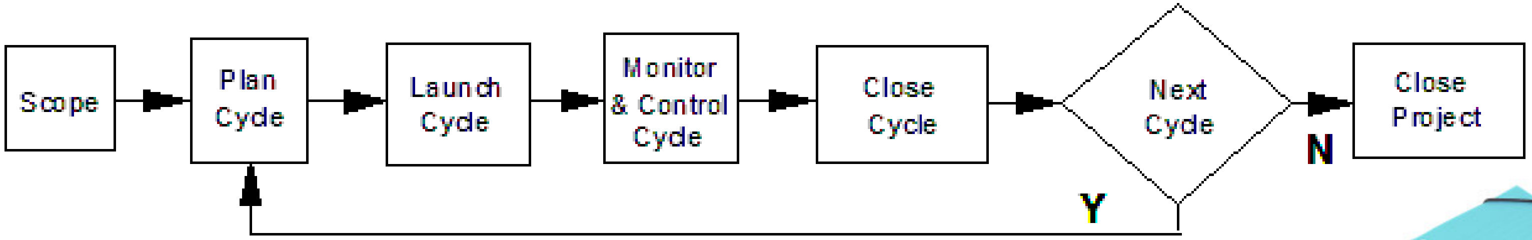


Figure 11-06

Adaptive PMLC Model

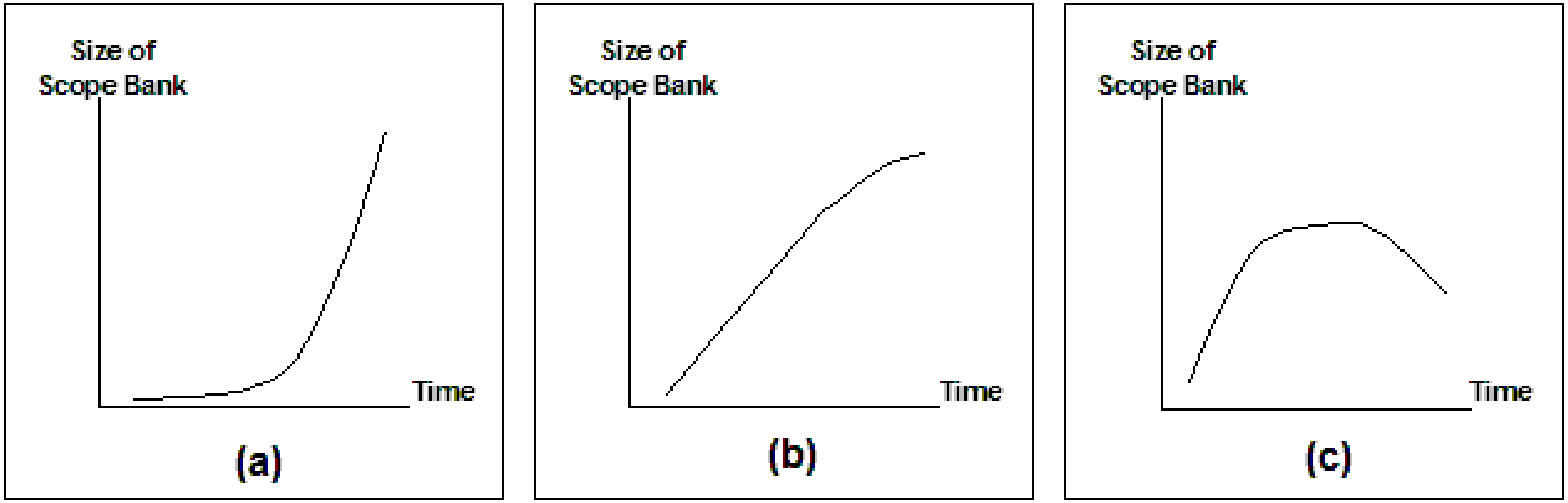
Adaptive

- Scope Phase
  - Sets the boundaries and high-level parameters for the project
  - Specify number of cycles and cycle length
  - Tentatively map out cycle objectives
- Plan Phase
  - Uses the Planning Process Group tools, templates, and processes for the coming cycle functionality
- Launch Phase
  - Same as Iterative PMLC Model
  - Establish sub-teams to work on concurrent swim lanes

Adaptive PMLC Model

- Monitor & Control Phase

Iterative



- Close Phase

Figure 11-07

Adaptive PMLC Model

Adaptive

Characteristics

- Iterative structure
- Just-in-time planning
- Critical mission projects
- Thrives on change through learning and discovery

Adaptive PMLC Model

Adaptive

Strengths

- Does not waste time on non-value-added work
- Avoids all management issues processing scope change requests
- Does not waste time planning uncertainty
- Provides maximum business value within the given time and cost constraints

Adaptive PMLC Model

Adaptive

Weaknesses

- Must have meaningful client involvement
- Cannot identify exactly what will be delivered at the end of the project

Adaptive PMLC Model

Adaptive

Types of Adaptive PMLC Models

- Adaptive Software Development (ASD)
- Adaptive Project Framework (APF)
- Dynamic Systems Development Method (DSDM)
- Scrum

Adaptive PMLC Model

Adaptive Software Development (ASD)

Adaptive

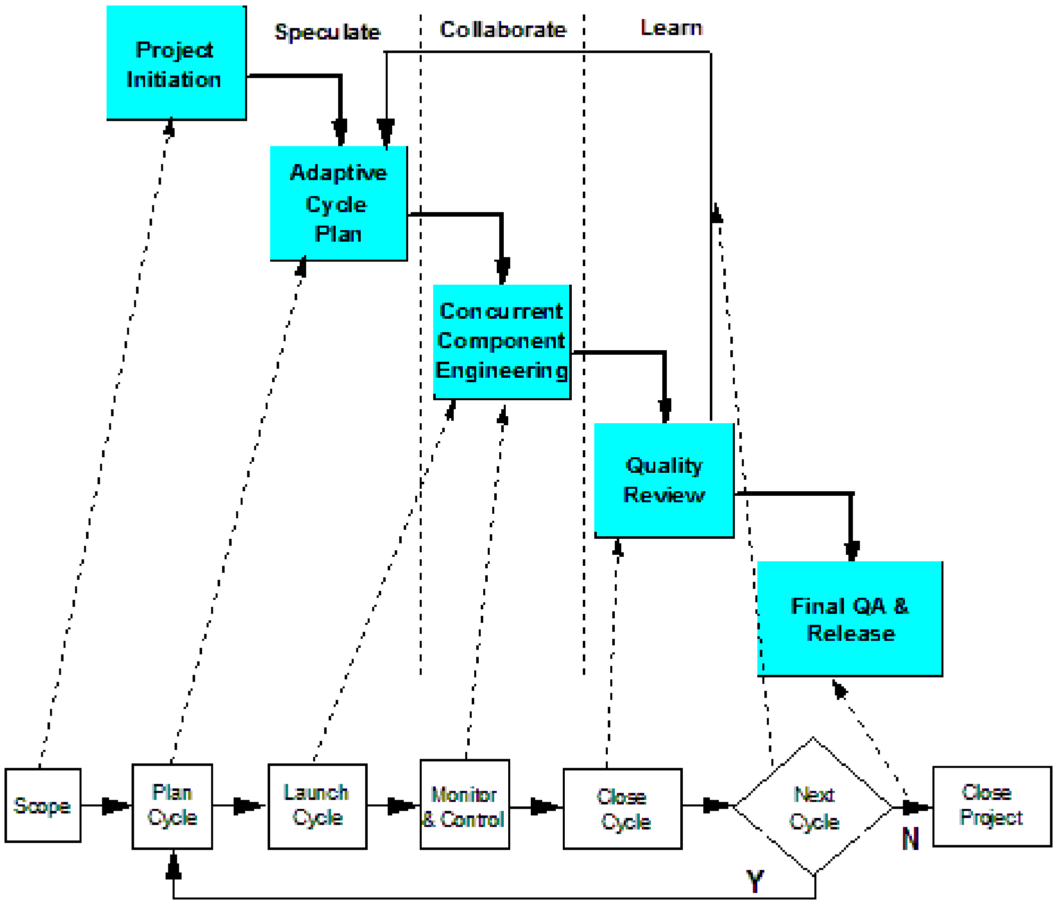


Figure 11-08

Adaptive PMLC Model

Adaptive

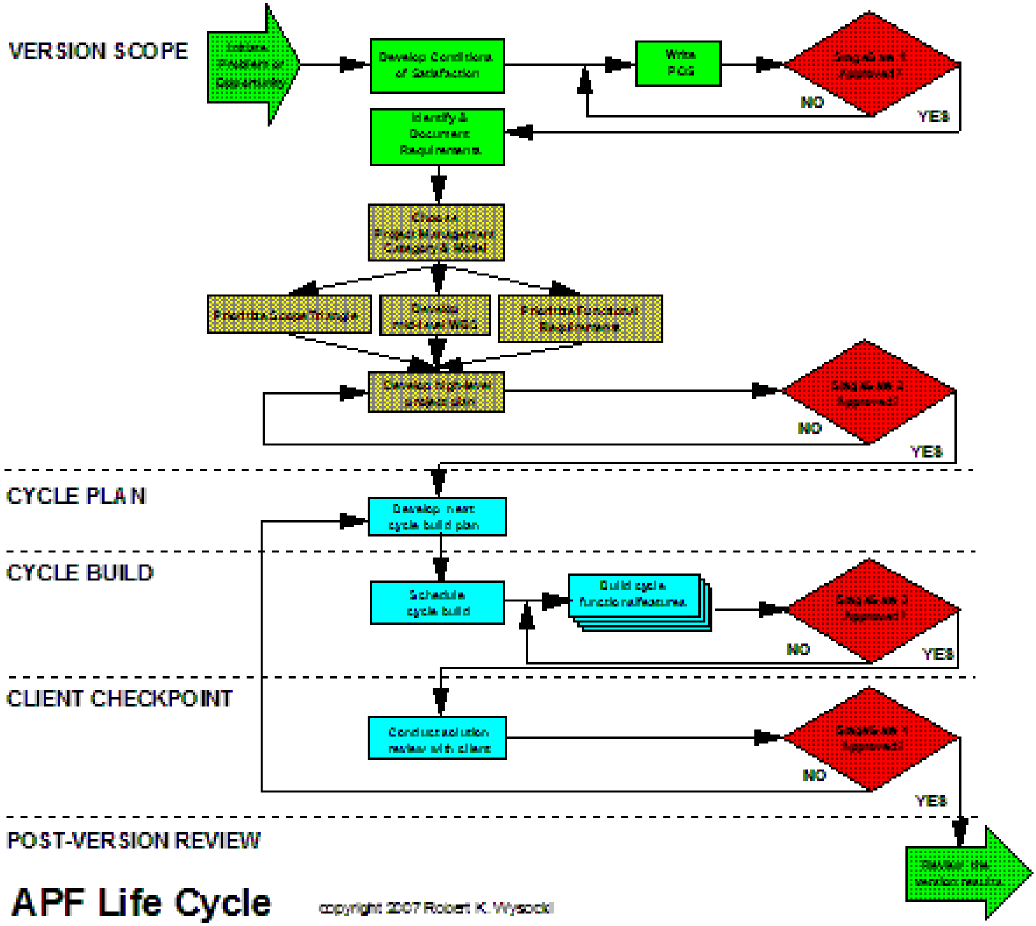
APF Core Values

- Client-focused
- Client-driven
- Incremental results early and often
- Continuous questioning and introspection
- Change is progress to a better solution
- Don’t speculate on the future

Adaptive PMLC Model

Adaptive Project Framework (APF)

Adaptive


VERSION SCOPE
Initiate Problem or Opportunity
Develop Conditions of Satisfaction
Write POS
NO
YES
Identify & Document Requirements
Choose Project Management Category & Model
Prioritize Scope Triangle
Develop mid-level WBS
Prioritize Functional Requirements
Develop high-level project plan
NO
YES
CYCLE PLAN
Develop next cycle build plan
CYCLE BUILD
Schedule cycle build
Build cycle functional features
NO
YES
CLIENT CHECKPOINT
Conduct solution review with client
NO
YES
POST-VERSION REVIEW
Review the version results

APF Life Cycle

copyright 2007 Robert K. Wysocki

Figure 11-09

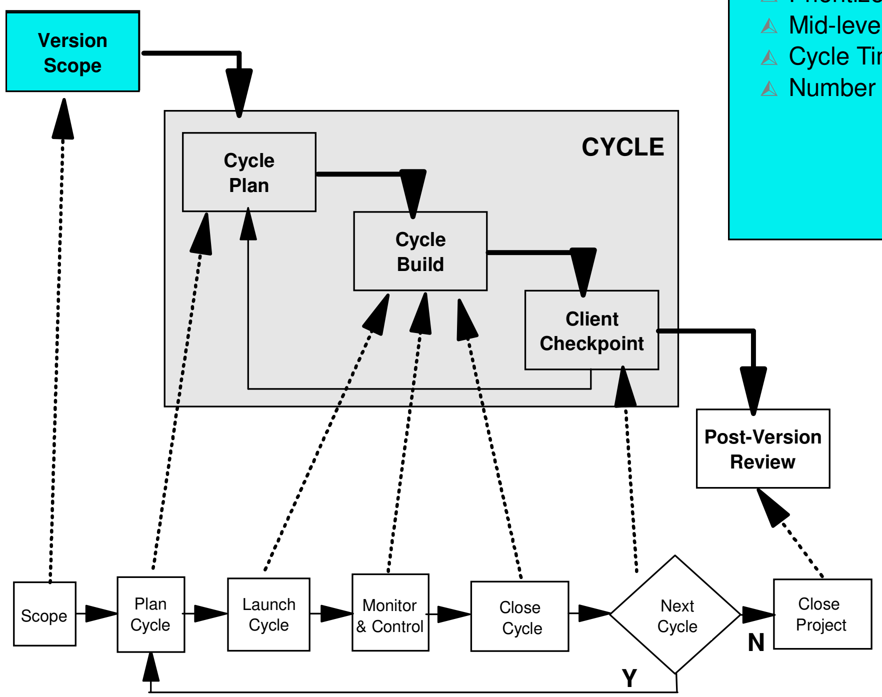
Adaptive PMLC Model

APF – Version Scope

Adaptive

DELIVERABLES

- COS
- POS
- RBS
- Prioritized Scope Triangle
- Prioritized Functions
- Mid-level WBS & Dependencies
- Cycle Time-box
- Number of Cycles



Version Scope

CYCLE

Cycle Plan

Cycle Build

Client Checkpoint

Post-Version Review

Scope

Plan Cycle

Launch Cycle

Monitor & Control

Close Cycle

Next Cycle

N

Y

Close Project

Figure 11-10

Adaptive PMLC Model

APF – Cycle Plan – Scope Triangle

Adaptive

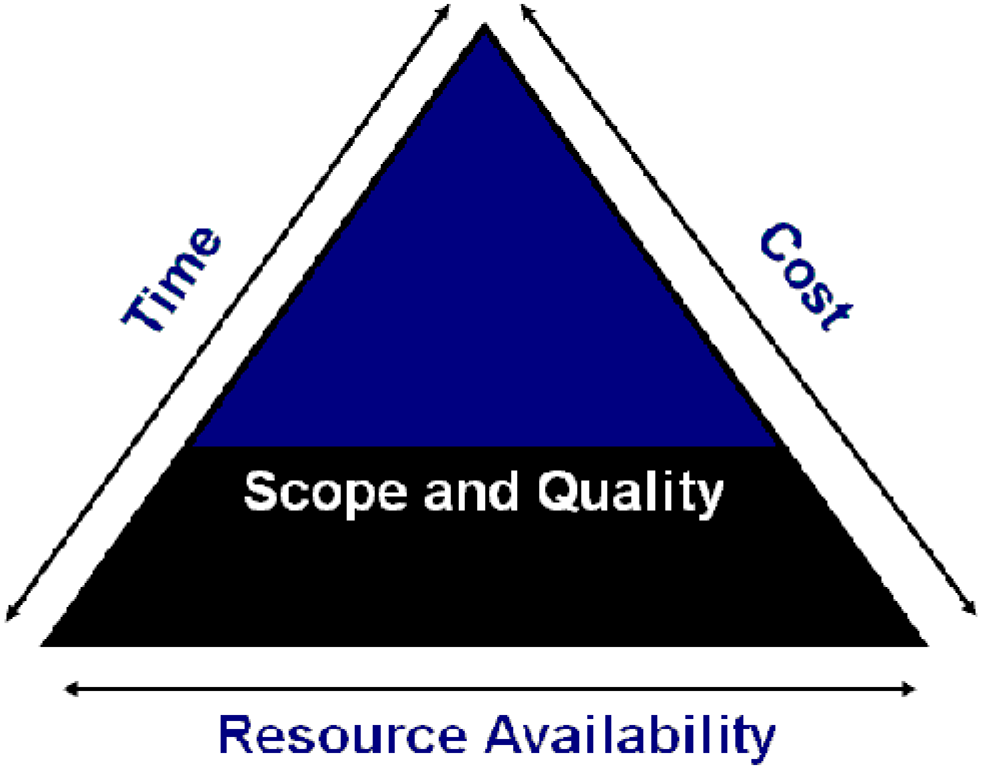


Figure 11-11

Adaptive PMLC Model

APF – Cycle Plan – Prioritization Approaches

Adaptive

- Forced Ranking
- Paired Comparison
- MoSCoW

Adaptive PMLC Model

Prioritization Approaches – Forced Ranking

Adaptive

MANAGER FUNCTION	A	B	C	D	RANK SUM	FORCED RANK
1	2	3	2	4	11	3
2	4	1	1	2	8	1
3	6	2	5	5	18	5
4	1	5	3	1	10	2
5	3	4	4	3	14	4
6	5	6	6	6	23	6

Table 11-02

Adaptive PMLC Model

Prioritization Approaches – Paired Comparison

Adaptive

	1	**2**	**3**	**4**	**5**	**6**	**SUM**	**RANK**
1	X	1	1	0	1	1	4	2
2	0	X	1	0	1	1	3	3
3	0	0	X	0	0	1	1	5
4	1	1	1	X	1	1	5	1
5	**0**	0	1	0	X	1	2	4
6	0	0	0	0	0	X	0	6

Table 11-03

Adaptive PMLC Model

Prioritization Approaches - MoSCoW

Adaptive

M: Must Have
S: Should Have
C: Could Have
W: Would be Nice to Have

Adaptive PMLC Model

APF – Cycle Plan Scope Triangle Ranking

Adaptive

Priority Variable	Critical (1)	(2)	(3)	(4)	Flexible (5)
Scope				X	
Quality			X		
Time	X				
Cost					X
Resource Availability		X			

Table 11-04

Adaptive PMLC Model

APF – Cycle Plan

Adaptive

DELIVERABLES

- Low-level WBS for this cycle
- Dependency Diagram
- Partition functionality
- Subteam plan & schedule

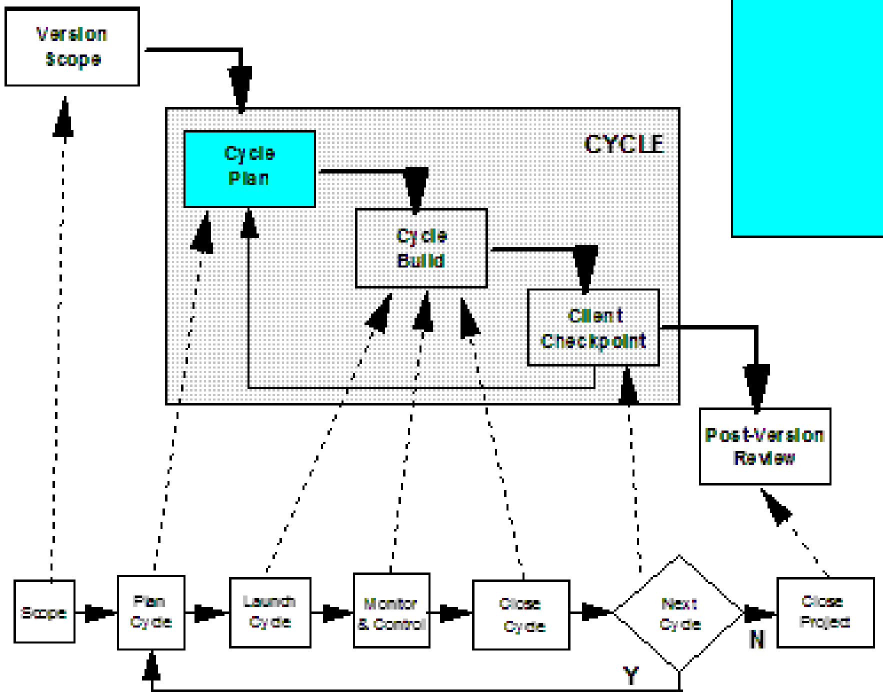
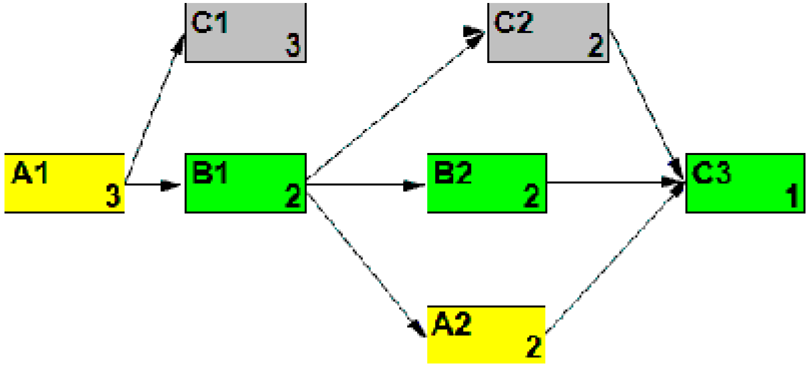


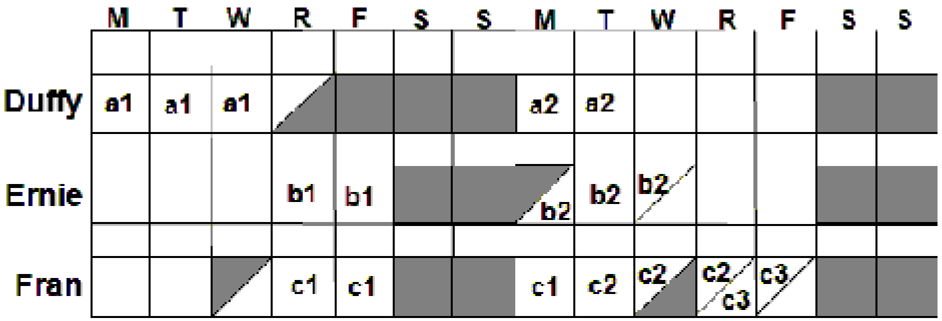
Figure 11-12

Adaptive PMLC Model

Adaptive

APF – Cycle Plan – Resource Loaded Schedule





	M	T	W	R	F	S	S	M	T	W	R	F	S	S
Duffy	a1	a1	a1	◪	▨	▨	▨	a2	a2				▨	▨
Ernie				b1	b1	▨	▨	◪ b2	b2	b2			▨	▨
Fran			◪	c1	c1	▨	▨	c1	c2	c2 ◪	c2 c3	c3	▨	▨

Figure 11-13

Adaptive PMLC Model

APF – Cycle Build

Adaptive

DELIVERABLES

- Whatever functionality can be built before the time-box expires

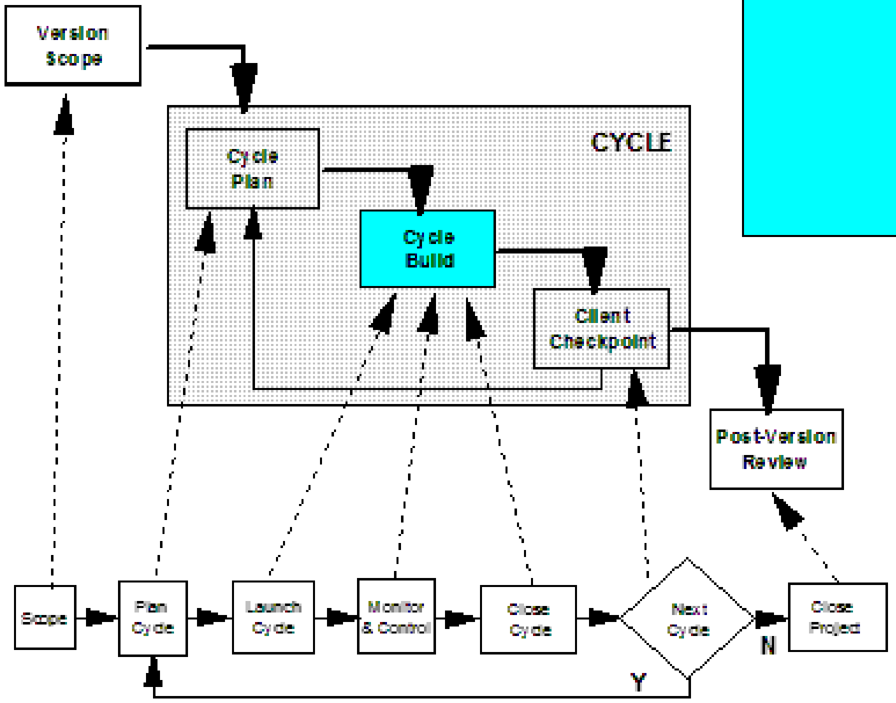


Figure 11-14

Adaptive PMLC Model

APF Cycle Build – Ending the Cycle

Adaptive

A cycle may end for any of the following reasons:

- The timebox expires
- All swim lanes completed early
- A major problem occurs

Adaptive PMLC Model

APF – Client Checkpoint

Adaptive

DELIVERABLES

- Quality review of completed functionality
- Adjust next cycle functionality and time-box

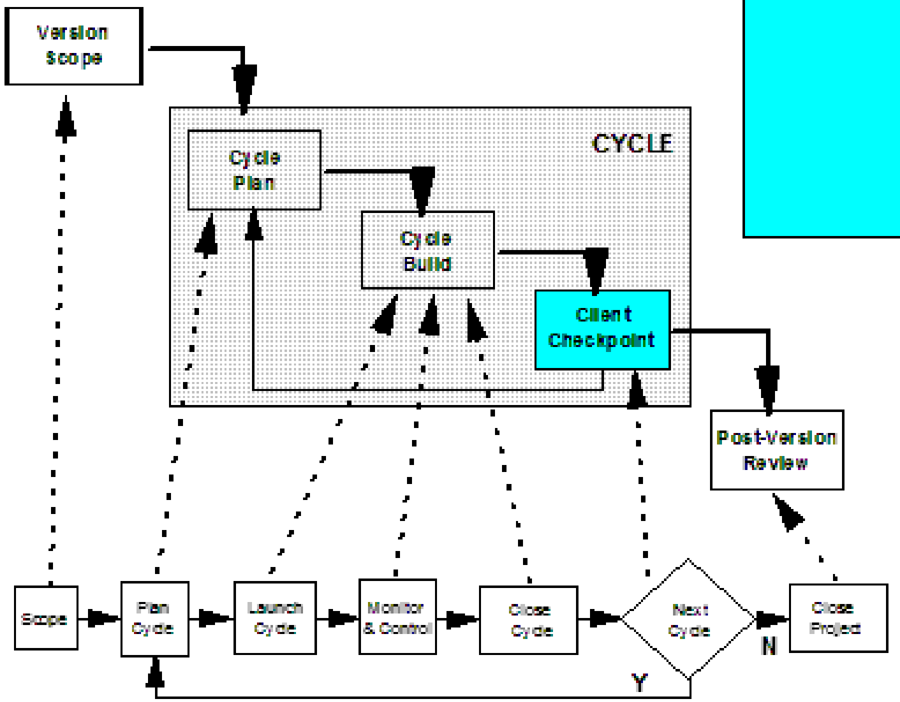


Figure 11-15

Adaptive PMLC Model

APF – Client Checkpoint – Inputs

Adaptive

- Functionality completed in the previous cycle
- Functionality planned but not completed in the previous cycle
- Functionality originally planned for this cycle
- Functionality planned for all cycles beyond the next one
- All learning and discovery that took place in all previous cycles
- Any changes that took place in the business environment during the previous cycles
- The extent to which the current solution is converging on the final solution
- The current contents of the Scope Bank

Adaptive PMLC Model

APF – Client Checkpoint – Ouputs

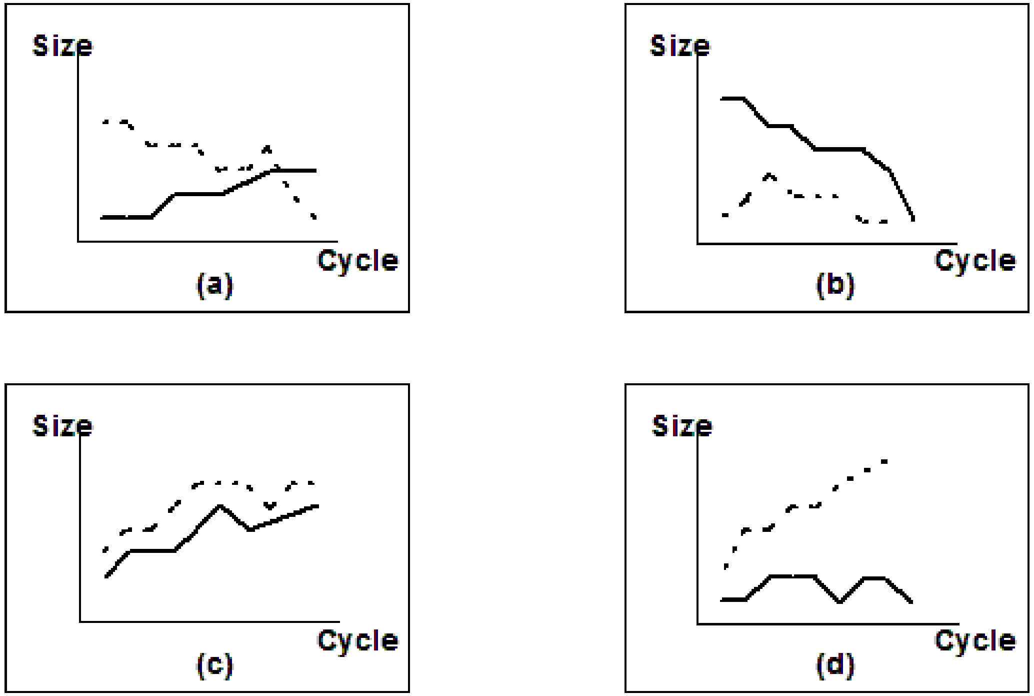
Adaptive

- Review the COS and make any adjustments to solution requirements
- Prioritize the items in the Scope Bank
- Identify and Prioritize Probative Swim Lane contents
- Identify and prioritize Integrative Swim Lane contents
- Select the items to be developed in the next cycle
- Determine the next cycle timebox

Adaptive PMLC Model

APF – Client Checkpoint – Probative versus Integrative Swim Lane sizes over time

Adaptive



Legend: Probative . . . . . .
Integrative ______

Figure 11-16

Adaptive PMLC Model

APF – Post-Version Review

Adaptive

DELIVERABLES

- Check on business outcomes
- Lessons learned to improve next version
- Lessons learned to improve APF

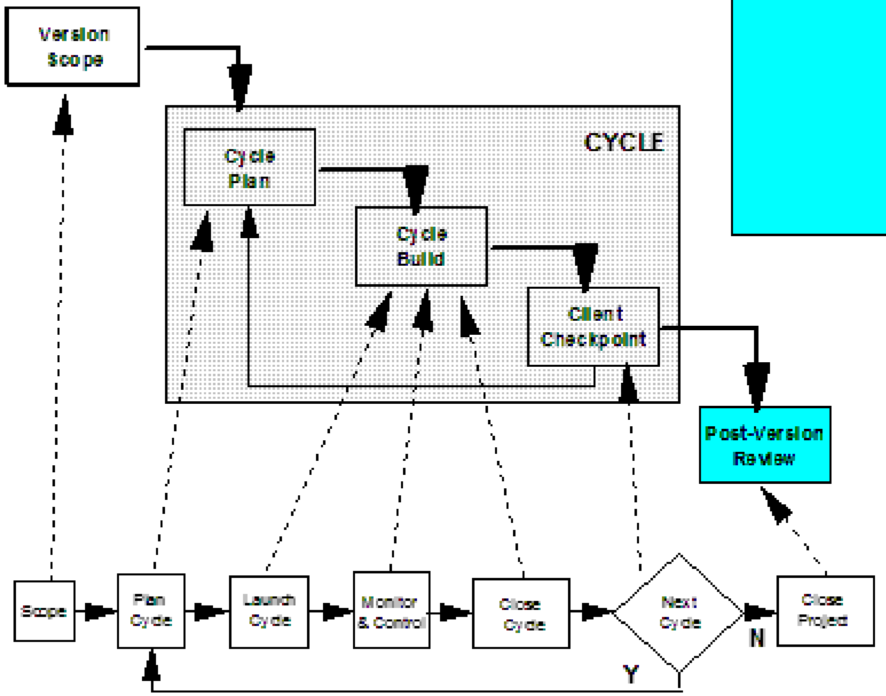


Figure 11-17

Adaptive PMLC Model

APF – Post-Version Review – Questions to be answered

Adaptive

- Was the expected business outcome realized?
- What was learned that can be used to improve the solution?
- What was learned that can be used to improve the effectiveness of APF?

Adaptive PMLC Model

Adapting APF

Adaptive

- Proof of Concept
- Revising the Version Scope
- Embedding APF in other PMLC models

Adaptive PMLC Model

Implementing APF

Adaptive

- Bottom-Up Approach
- Top-Down Approach

Adaptive PMLC Model

Dynamic Systems Development Method (DSDM)

Adaptive

DSDM key principles:

- Active client involvement is imperative
- DSDM teams must be empowered to make decisions
- The focus is on frequent delivery of product
- Fitness for business purpose is the essential criterion for acceptance of deliverables
- Iterative and incremental development is necessary to converge on an acceptable business solution
- All changes during development are reversible
- Requirements are baselined at a high level
- Testing is integrated throughout the life cycle
- A collaborative and cooperative approach between all stakeholders is essential

Jennifer Stapleton, *DSDM: Dynamic Systems Development Method*, Addison-Wesley, 1997

Adaptive PMLC Model

Dynamic Systems Development Method (DSDM)

Adaptive

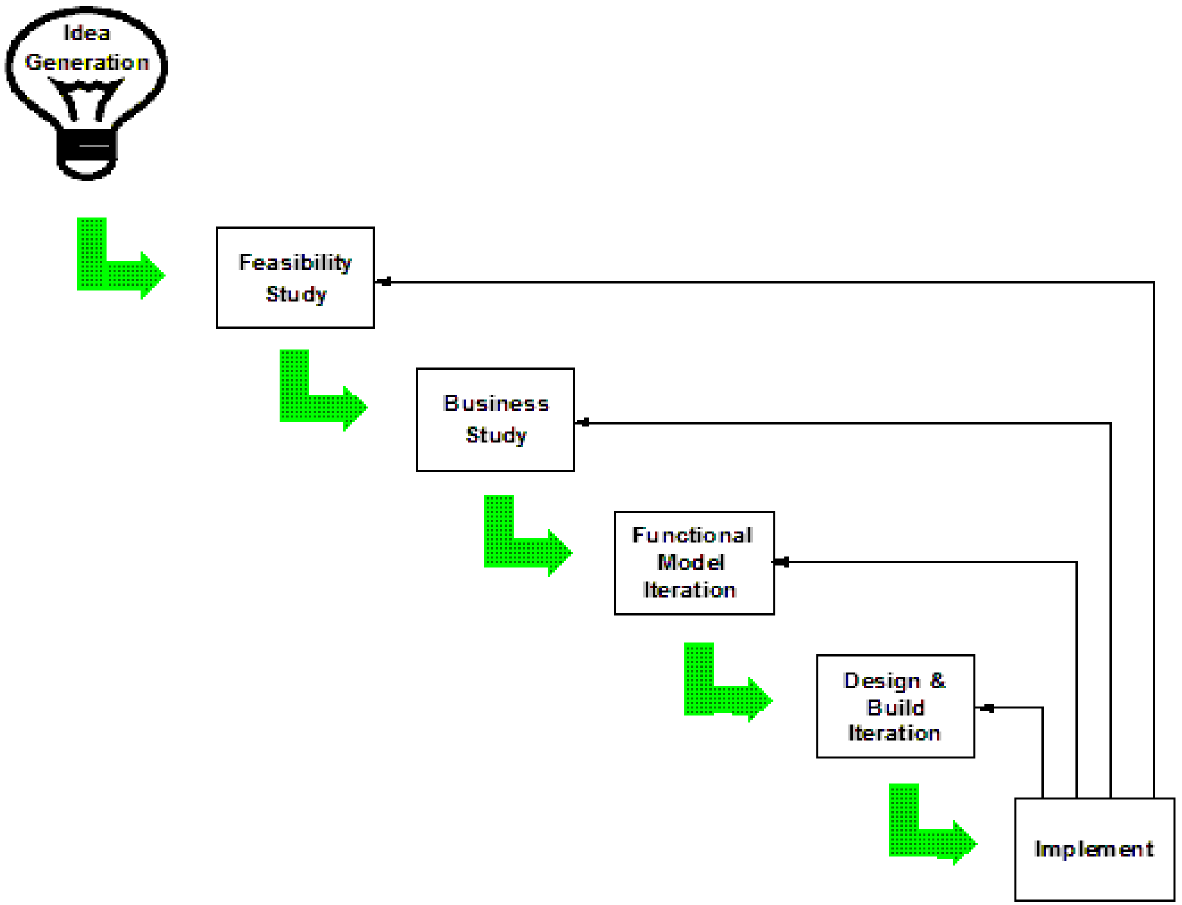


Figure 11-18

Adaptive PMLC Model

Dynamic Systems Development Method (DSDM)

Adaptive

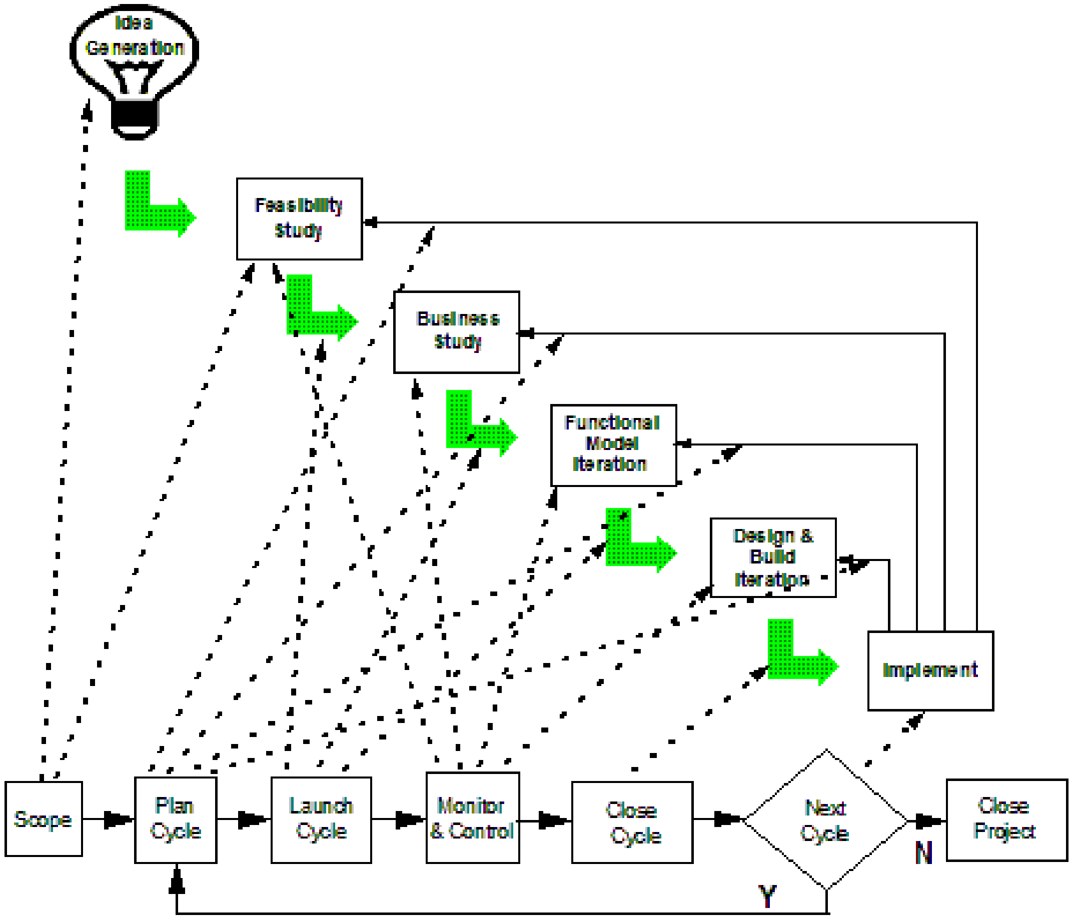
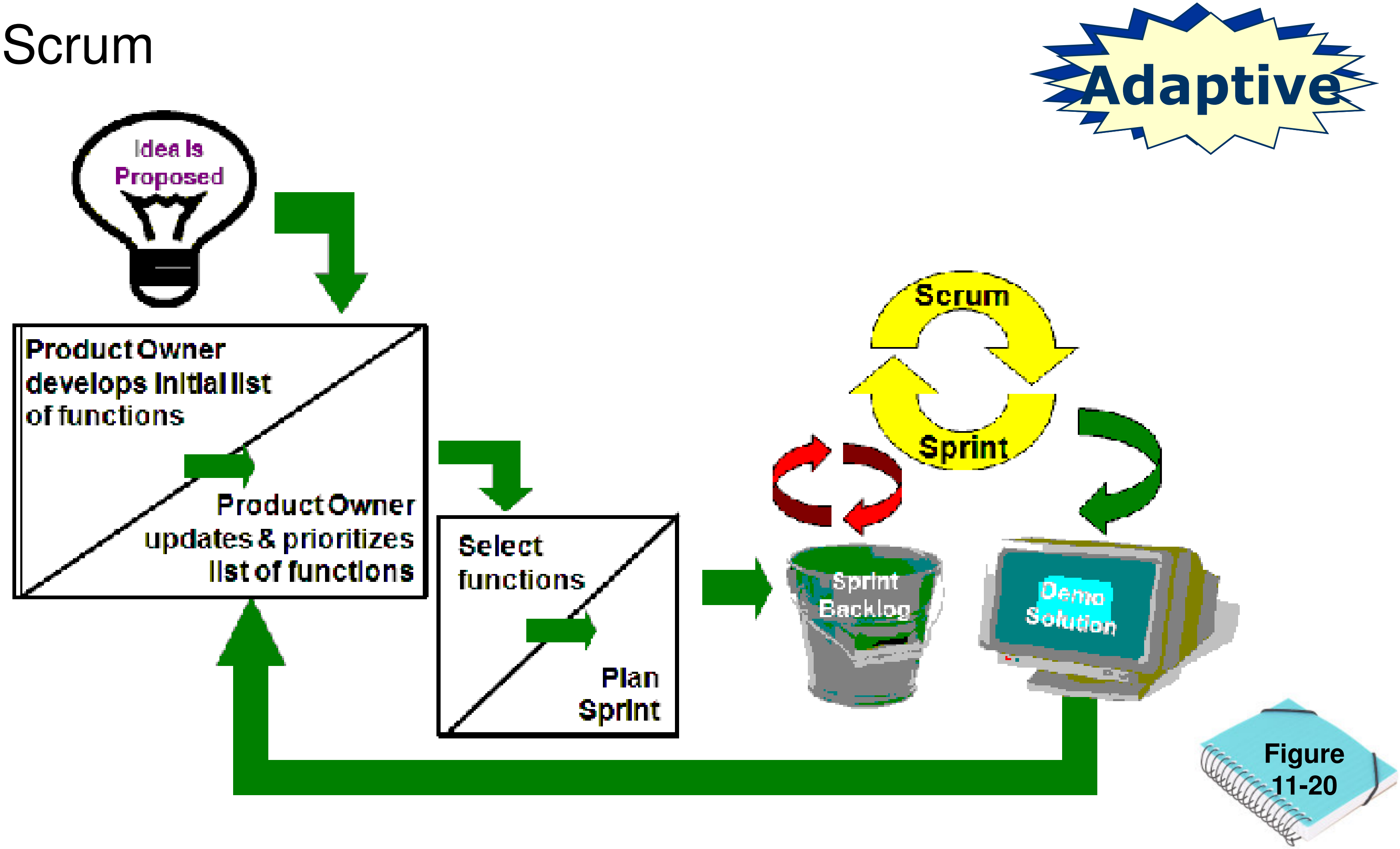


Figure 11-19

Adaptive PMLC Model

Scrum


Adaptive
Idea Is Proposed
Product Owner develops Initial list of functions
Product Owner updates & prioritizes list of functions
Select functions
Plan Sprint
Scrum
Sprint
Sprint Backlog
Demo Solution
Figure 11-20

Adaptive PMLC Model

Scrum

Adaptive

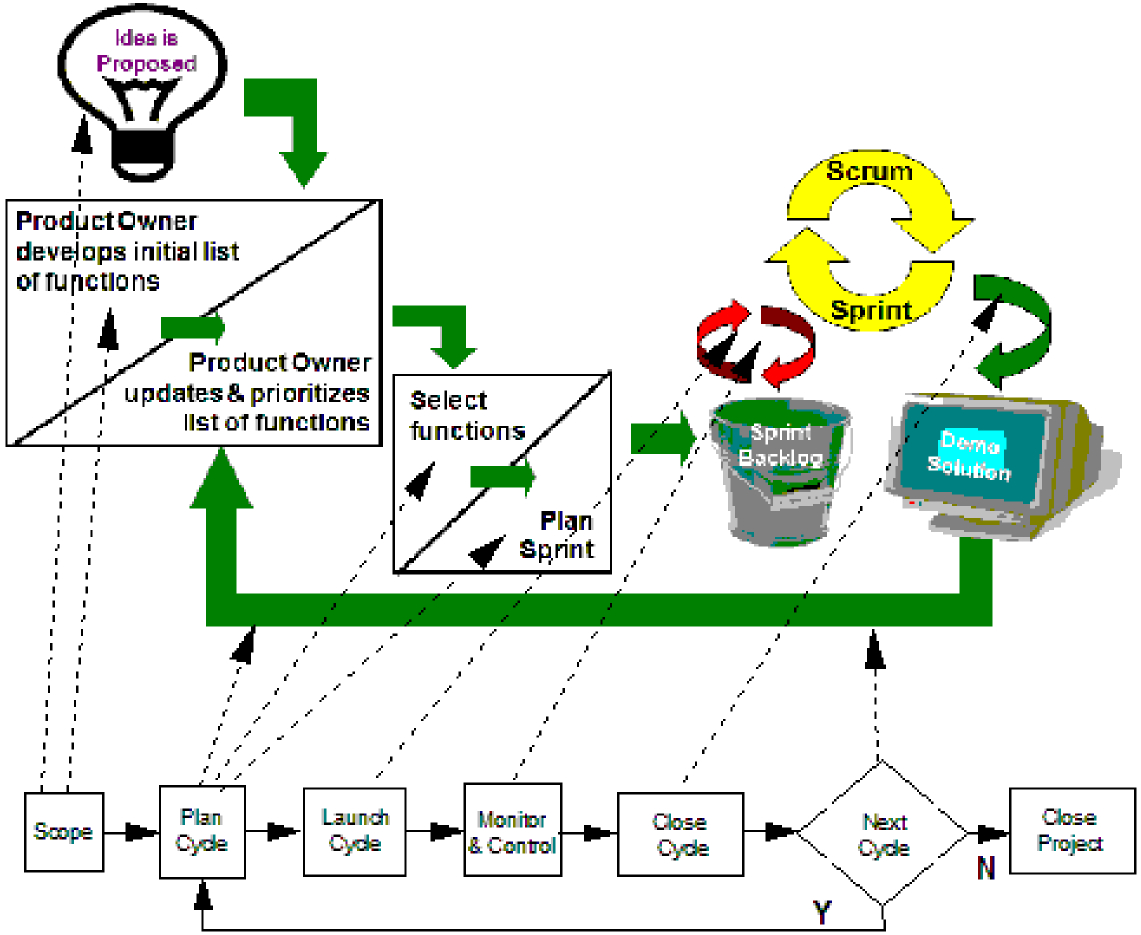


Figure 11-21

Adaptive PMLC Model

When to Use an Adaptive PMLC Model

Adaptive

- Have you or a trusted colleague had successful adaptive project experience with this client before?
- If this is the first adaptive experience for this client, have you assured yourself that they will be meaningfully involved throughout the entire project?
- Has the client appointed a qualified and respected co-project manager for this project?

Adaptive PMLC Model

Adaptive

Adapting & Integrating the Toolkits for Maximum Effectiveness

- Scope the Next Iteration/Cycle
  - Eliciting the true needs of the client
  - Documenting the client’s needs
  - Negotiating with the client how those needs will be met
  - Writing a one-page description of the project
  - Gaining senior management approval to plan the project

Adaptive PMLC Model

Adaptive

Adapting & Integrating the Toolkits for Maximum Effectiveness

- Planning the Next Iteration/Cycle
  - Defining all of the work of the next iteration/cycle
  - Estimating how long it will take to complete the work
  - Estimating the resources required to complete the work
  - Estimating the total cost of the work
  - Sequencing the work
  - Building the initial iteration/cycle schedule
  - Analyzing and adjusting the iteration/cycle schedule
  - Writing the risk management plan
  - Documenting the iteration/cycle plan
  - Gaining senior management approval to launch the iteration/cycle

Adaptive PMLC Model

Adaptive

Adapting & Integrating the Toolkits for Maximum Effectiveness

- Launching the Next Iteration/Cycle
  - Recruiting the project manager
  - Recruiting the project team
  - Writing the Project Description Document
  - Establishing team operating rules
  - Establishing the scope change management process
  - Managing team communications
  - Writing work packages

Adaptive PMLC Model

Adaptive

Adapting & Integrating the Toolkits for Maximum Effectiveness

- Monitoring & Controlling the Next Iteration/Cycle
  - Establishing the iteration/cycle performance and reporting system
  - Monitoring the iteration/cycle performance
  - Monitoring risk
  - Reporting project status
  - Processing scope change requests
  - Discovering and solving problems

Adaptive PMLC Model

Adaptive

Adapting & Integrating the Toolkits for Maximum Effectiveness

- Close the Next Iteration/Cycle
  - Gaining client approval of having met iteration/cycle requirements
  - Planning and installing deliverables
  - Writing the final iteration/cycle report
  - Conducting the post-iteration/cycle audit
- An APM project ends when
  - The time and budget are expended
  - An acceptable solution with the expected business value is found
  - The project is abandoned

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch12: Extreme Project Management

Presented by
(facilitator name)

Summary of Chapter 12

- What is Extreme Project Management?
- Extreme project management life cycle
  - Definition
  - Characteristics
  - Strengths/Weaknesses
  - When to use an Extreme Approach
- What is Emertxe Project Management?
- Using the tools, templates, and processes for maximum xPM effectiveness

What is Extreme Project Management ?

Extreme

Extreme Project Management is a set of tools, templates, and processes for managing projects whose goal expresses an ideal state but whose solution for reaching that goal is unknown or unlikely.

Extreme Project Management Life Cycle Model

Extreme

Definition

- An Extreme PMLC Model is one that proceeds from phase to phase based on very limited knowledge of goal and solution. Each phase learns from the proceeding ones and redirects the next phase in an attempt to converge on an acceptable goal and solution. At the discretion of the client a phase may release a partial solution.

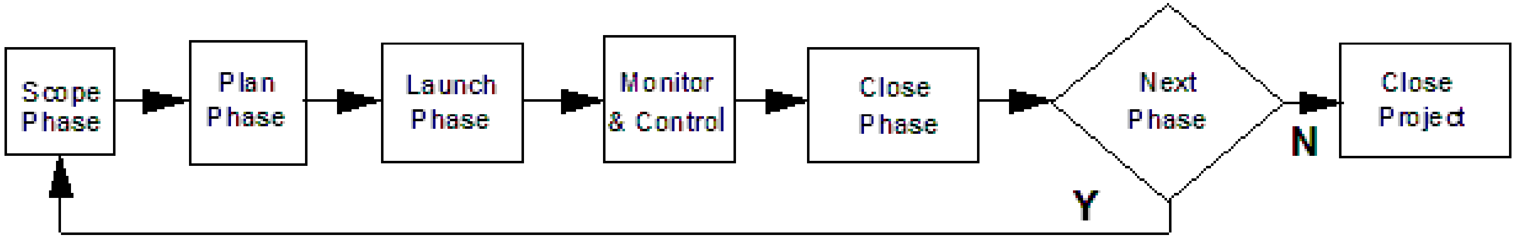


Figure 12-01

Extreme PMLC Model

Extreme

Characteristics

- High speed
- High change
- High uncertainty

Extreme PMLC Model

Extreme

Strengths

- Keeps options open as late as possible
- Offers an early look at a number of partial solutions

Extreme PMLC Model

Extreme

Weaknesses

- May be looking for solutions in all the wrong places
- No guarantee that any business value will result from the project

Extreme PMLC Model – INSPIRE

Extreme

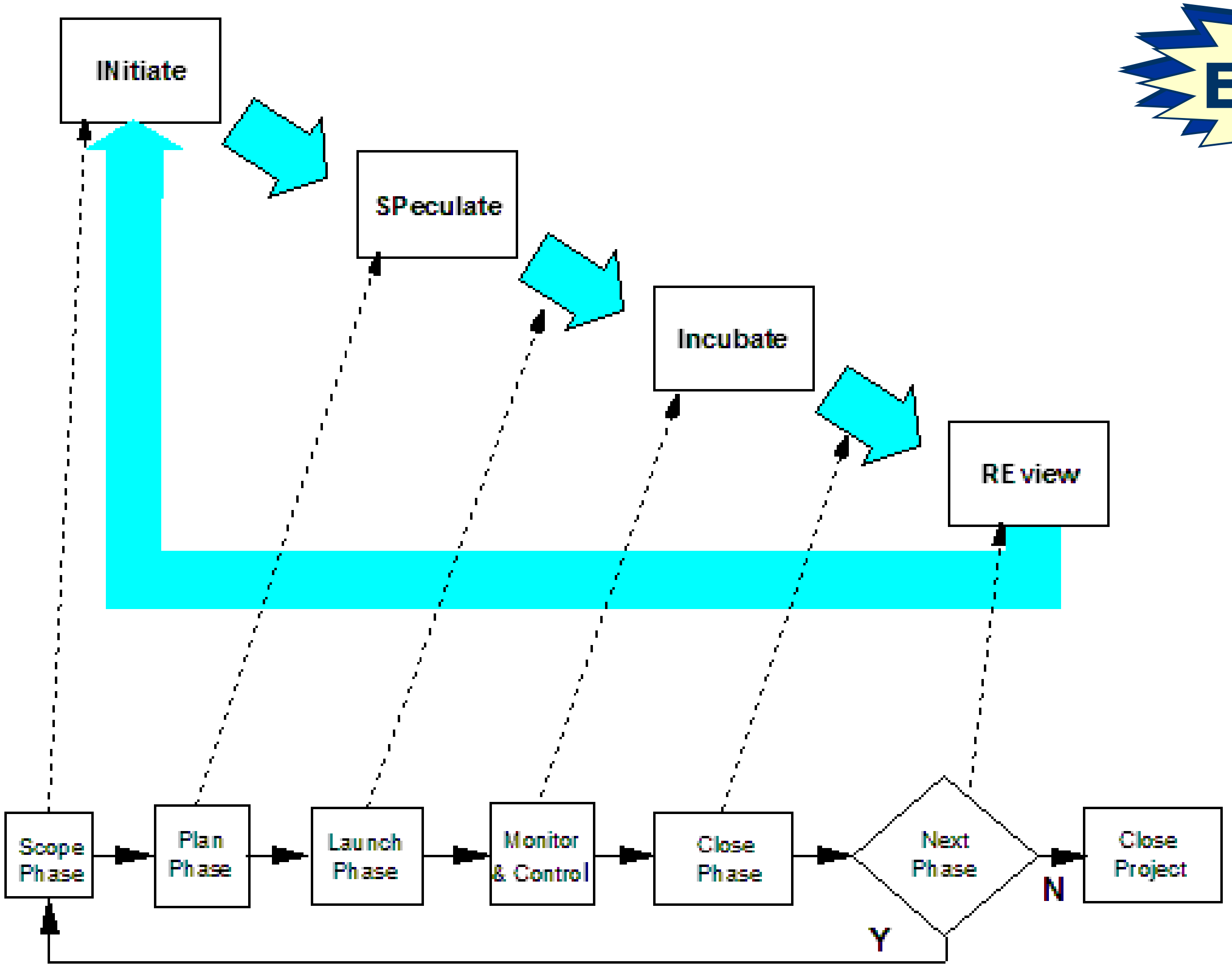


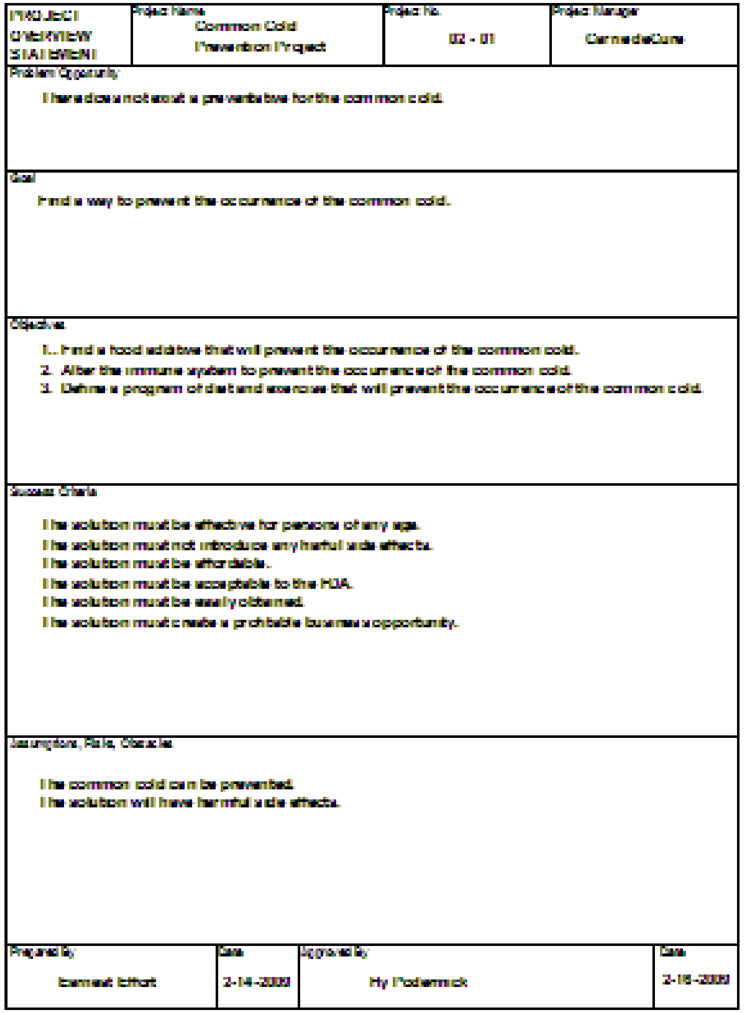
Figure 12-02

Extreme PMLC Model – INSPIRE

Extreme

- **INitiate**
  - Defining the project goal
  - INSPIRE POS
  - Establishing a project timebox and cost
  - Establishing the number of phases and phase length
  - Tradeoffs in the Scope Triangle

Extreme PMLC Model – Example POS



PROJECT OVERVIEW STATEMENT	Project Name Common Cold Prevention Project	Project No. 02 - 01	Project Manager CarnedeCure

Problem/Opportunity

There does not exist a preventative for the common cold.

Goal

Find a way to prevent the occurrence of the common cold.

Objectives

1. Find a food additive that will prevent the occurrence of the common cold.
2. Alter the immune system to prevent the occurrence of the common cold.
3. Define a program of diet and exercise that will prevent the occurrence of the common cold.

Success Criteria

The solution must be effective for persons of any age.
The solution must not introduce any harful side effects.
The solution must be affordable.
The solution must be acceptable to the FDA.
The solution must be easily obtained.
The solution must create a profitable business opportunity.

Assumptions, Risks, Obstacles

The common cold can be prevented.
The solution will have harmful side effects.

Prepared By Earnest Effort	Date 2-14-2008	Approved By Hy Podermick	Date 2-18-2008

Extreme PMLC Model – INSPIRE

Extreme

- **SPeculate**
  - Defining how the project will be done
  - Conditions of Satisfaction
  - Scenarios, stories, and use cases
  - Prioritizing requirements
  - Identifying the first phase deliverables
  - Go/No-Go decision
  - Planning for later phases

Extreme PMLC Model – INSPIRE

Extreme

- **Incubate**
    - Assigning resources
    - Establishing phase plan
    - Collaboratively producing deliverables

Extreme PMLC Model – INSPIRE

Extreme

- **REview**
  - Applying learning and discovery from the previous phase
  - Revising the project goal
  - Reprioritizing requirements
  - Making the Go/No-Go decision for the next phase

What is Emertxe Project Management ?

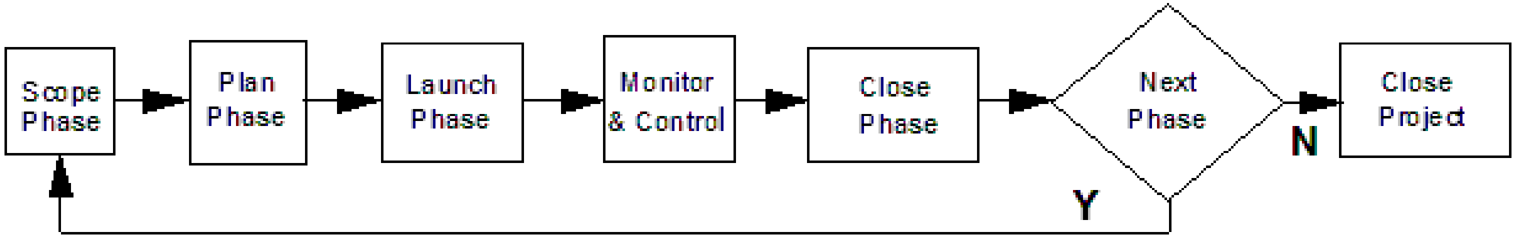
Emertxe Project Management is a set of tools, templates, and processes for managing projects whose business value from an available solution is unknown or nonexistent.

Emertxe Project Management Life Cycle Model

Emertxe

Definition

- An Emertxe PMLC Model is one that proceeds from phase to phase based on very limited knowledge of the goal. Each phase learns from the proceeding ones and redirects the next phase in an attempt to converge on an acceptable goal that can be supported by some variation of the known solution.



Extreme PMLC Model

Extreme

Adapting & Integrating the Toolkits for Maximum Effectiveness

- Scope the Next Phase
  - Elicit the true needs of the client
  - Documenting the client’s needs
  - Negotiating with the client how those needs will be met
  - Writing a one page description of the project
  - Gaining senior management approval to plan the project

Extreme PMLC Model

Extreme

Adapting & Integrating the Toolkits for Maximum Effectiveness

- Planning the Next Phase
  - Defining all of the work of the next phase
  - Estimating how long it will take to complete the work
  - Estimating the resources required to complete the work
  - Estimating the total cost of the work
  - Sequencing the work
  - Building the initial iphase schedule
  - Analyzing and adjusting the phase schedule
  - Writing the risk management plan
  - Documenting the phase plan
  - Gaining senior management approval to launch the phase

Extreme PMLC Model

Extreme

Adapting & Integrating the Toolkits for Maximum Effectiveness

- Launching the Next Phase
  - Recruiting the project manager
  - Recruiting the project team
  - Writing the Project Description Document
  - Establishing team operating rules
  - Establishing the scope change management process
  - Managing team communications
  - Writing work packages

Extreme PMLC Model

Extreme

Adapting & Integrating the Toolkits for Effectiveness

- Monitoring & Controlling the Next Phase
  - Establishing the phase performance and reporting system
  - Monitoring the phase performance
  - Monitoring risk
  - Reporting project status
  - Processing scope change requests
  - Discovering and solving problems

Extreme PMLC Model

Extreme

Adapting & Integrating the Toolkits for Maximum Effectiveness

- Close the Next Phase
  - Gaining client approval of having met phase requirements
  - Planning and installing deliverables
  - Writing the final phase report
  - Conducting the post-iphase audit
- An APM project ends when
  - The time and budget are expended
  - An acceptable solution with the expected business value is found
  - The project is abandoned

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch13: Establishing & Maturing a Project Support Office

Presented by
(facilitator name)

Ch13: Establishing & Maturing a PSO

Summary of Chapter 13

- Background of the Project Support Office (PSO)
- Defining a PSO
- Naming the PSO
- Establishing your PSO mission
- Framing the PSO objectives
- Exploring PSO support functions
- Selecting a PSO organizational structure
- Organizational placement of the PSO
- Determining when you need a PSO
- Establishing as PSO
- Challenges to implementing a PSO
- The PSO of the future
- Hub & Spoke BP^{4}SO

Reasons to implement a PSO

- Volume of project is increasing
- Need for more trained project managers
- Lack of standards leads to inefficiencies
- Resource contention

What is a Project Support Office (PSO)?

A temporary or permanent organizational unit that provides a portfolio of services to support project teams that are responsible for a specific portfolio of projects

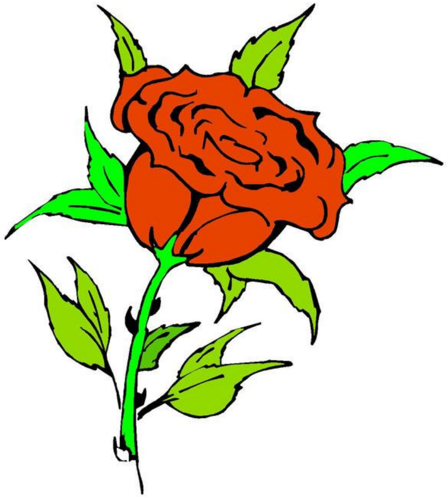
Characteristics of a World Class PSO

- The PSO is led by the VP PSO who has a seat at the strategy table.
- The PSO has a portfolio management system in place aligned with the business strategic plan.
- The PSO and its PM methodology are assessed at CMMI Maturity Level 5.
- Every PM has a practice maturity level at least CMMI Maturity Level 3.
- The project failure rate is less than 10%.
- The PSO offers knock-your-socks-off service to teams, sponsors, and executive management.
- All project managers have an approved and active professional development program administered by the PSO.

Naming the PSO

A rose by any other name …

- Project Office
- Program Office
- Project Management Office
- Project Control Office
- PM Center of Excellence
- PM Community of Practice
- PM Group
- Enterprise PMO
- IT Project Support
- Directorate of PM
- Development Management Office
- Mission Central



These are actual client names

PSO hierarchical planning decisions

What will be its mission?

What will be its objectives?

What services will it offer?

What will be its organizational structure?

How will it be staffed?

What will it be called?

Different Mission Statements

A. Provide overall management and administrative support to the ALPHA Program

B. Establish and monitor compliance to the Project Management Methodology

C. Provide a comprehensive portfolio of support services to all project managers on an as requested basis

Mission Statement

An actual client EPSO Mission Statement

To provide a comprehensive portfolio of strategic, tactical, and operational support services to all project teams, sponsors, and executives in order to assure the delivery of maximum business value from the investment in the project portfolio.

Objectives

- Help project teams deliver value
- Increase the success rate of projects to 75%
- Reach PMMM Level 4

Objectives

An actual client EPSO Objective Statement

- Define a project life cycle with stagegate approvals.
- Design, develop, deploy, and support a comprehensive portfolio of tools, templates, and processes to effectively support all projects.
- Design and deploy a project review process to support project teams and monitor compliance to established standards and practices.
- Establish a project portfolio management process to maximize the business value of project investments.
- Establish a decision support system and dashboard to support executive management's project decisions and provide for the timely monitoring of the project portfolio status.
- Design, develop, deploy, and support a comprehensive HR Project Management System.
- Design, develop, deploy, and support a continuous process improvement program for the EPSO.

PSO Services

➢ Project Support	6
➢ Consulting & Mentoring	7
➢ Methods & Standards	12
➢ Software Tools	6
➢ Training	8
➢ Staffing & Development	9
Total possible services	48

And you can probably think of a few more

Ch13: Establishing & Maturing a PSO

Project Support

- Schedule updating & reporting
- Timesheet recording & maintenance
- Report production & distribution
- Report archiving
- Report consolidation & distribution
- Project notebook maintenance

Consulting & Mentoring

- Proposal development support
- Facilitating requirements gathering meetings
- Facilitating project planning sessions
- Risk assessment
- Project interventions
- Mentoring & coaching project managers
- Mentoring senior management

Methods & Standards

- Collaboratively developing project management processes
- Establishing, monitoring, & enforcing standards
- Project selection for the portfolio
- WBS construction
- Project network diagram development
- Maintenance of a tools and process library
- Bid preparation
- Risk assessment
- Status reporting
- Scope change management process
- Documentation
- Change orders

Software Tools

- Software evaluation
- Software selection
- Software acquisition and licensing
- Vendor negotiations
- Software training
- Software management & maintenance

Training

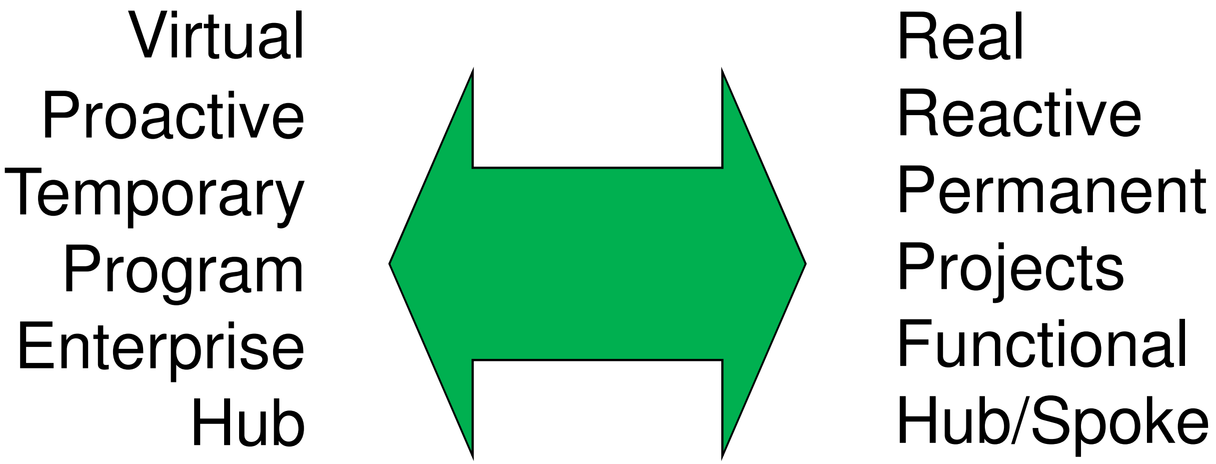
- Project management basics
- Advanced project management
- PMP Exam preparation
- Specialized topics
- Support Training Department
- Develop courses and course content
- Deliver courses
- PM training vendor selection

Ch13: Establishing & Maturing a PSO

Staffing and Development

- Human resource development
- Identification/assessment of skills
- Selection of team members
- Selection of project managers
- Assessment of project teams
- Professional development
- Career guidance and development

Organizational structures



Virtual	Real
Proactive	Reactive
Temporary	Permanent
Program	Projects
Enterprise	Functional
Hub	Hub/Spoke

Organizational structures

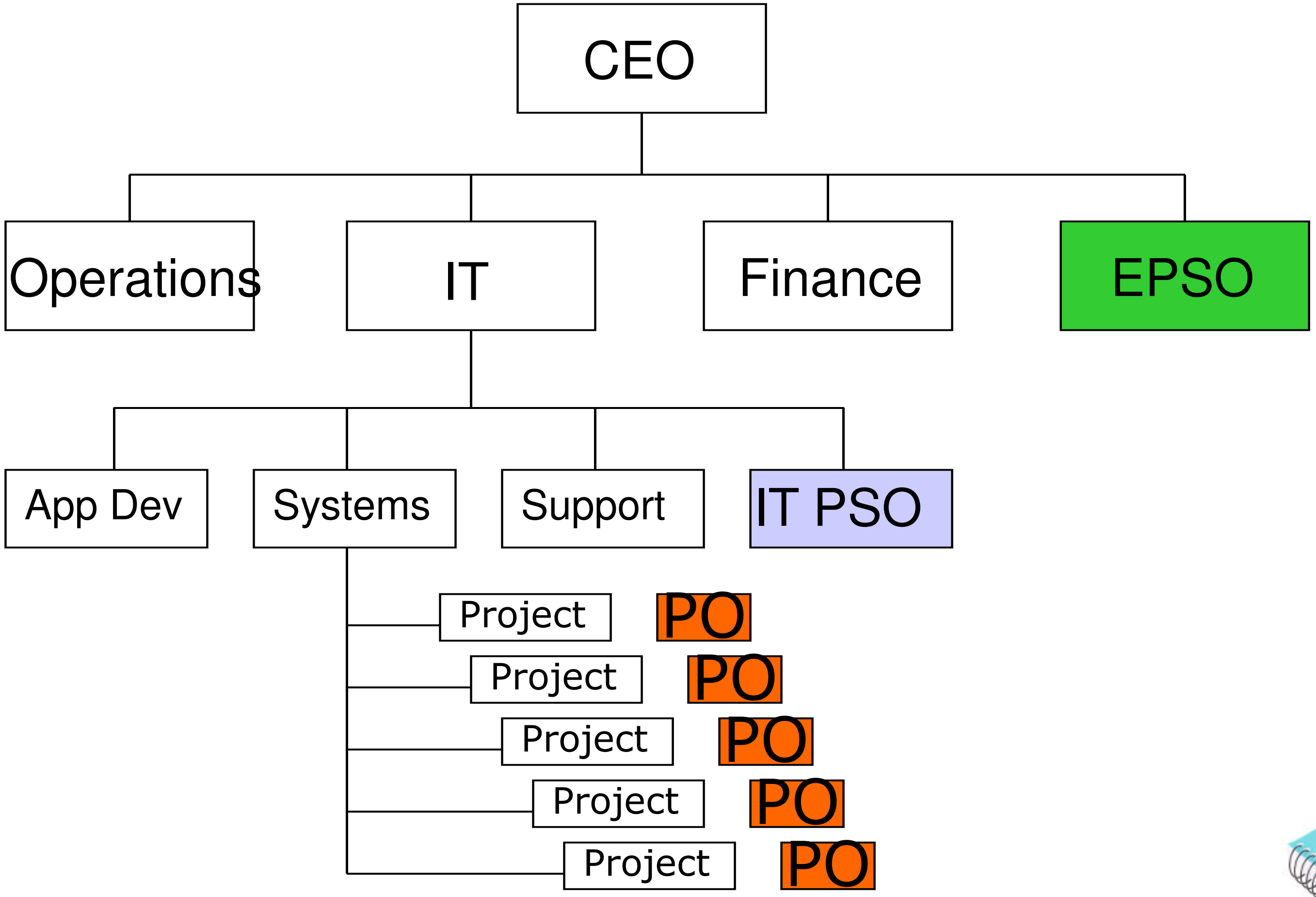
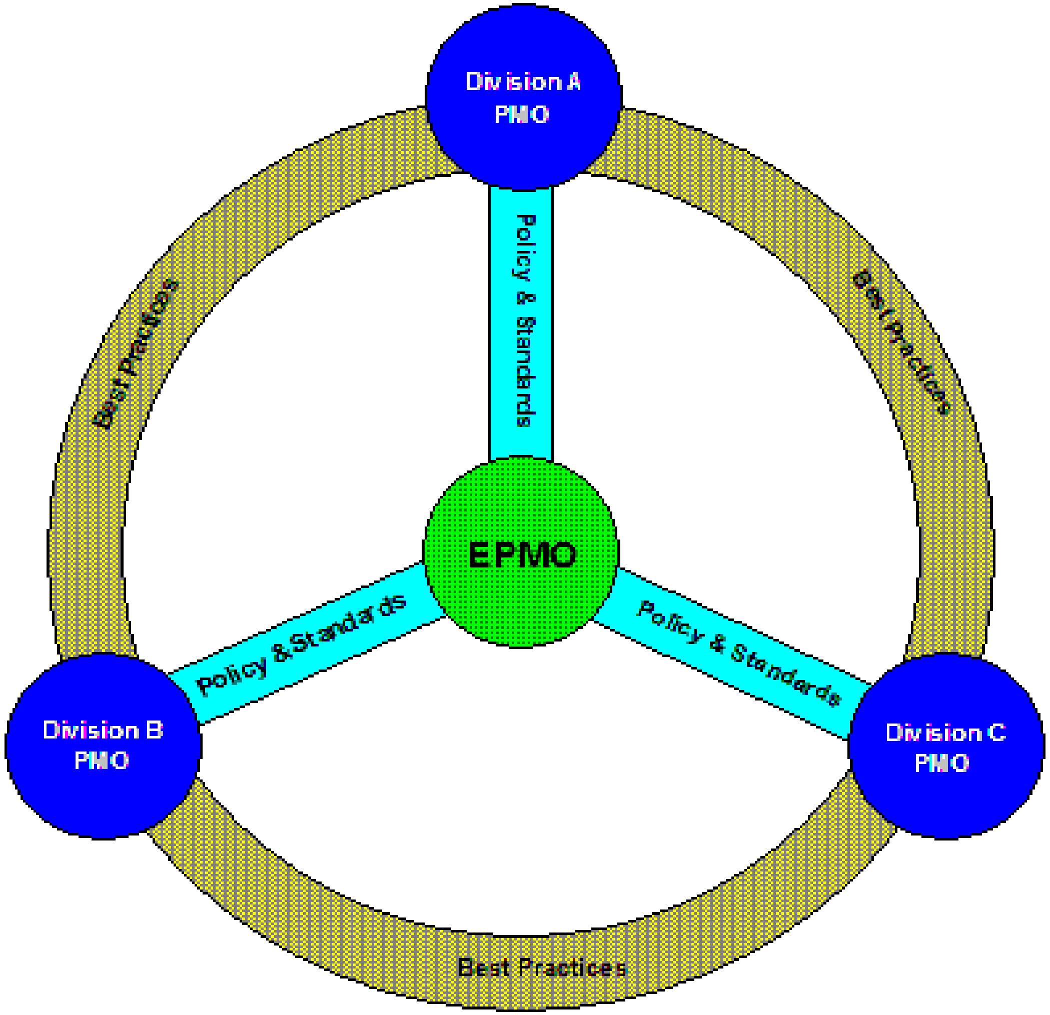


Figure 13-01

Organizational structures – Hub & Spoke



Staffing the PSO

- Virtual PSO
- PMs are assigned to the PSO on a rotating basis
- PMs assigned to the PSO
- PMs assigned at the division level
- PMs assigned at the department level

The Standish Group Report

IT projects fail for:

1. Lack of user input
2. Incomplete requirements and specification
3. Changing requirements and specification
4. Lack of executive support
5. Technology incompetence
6. Lack of resources
7. Unrealistic expectations
8. Unclear objectives
9. Unrealistic time frames
10. New technology

Several Symptoms That You Need a PSO

- Project failure rates are too high
- Training is not producing results
- HR project staff planning isn't effective
- Inability to leverage best practices
- Lack of control over the project portfolio
- No consistency in project reporting
- Too many resource scheduling conflicts
- Gap between process and practice

Ch13: Establishing & Maturing a PSO

You need a PMO if you check more than 6 boxes

☐ Project failure rates are too high
☐ Scope change requests remain high through the project
☐ One resource pool is staffing multiple projects
☐ There is lack of PM expertise in needed areas
☐ Several vendors and contractors are used across projects
☐ There is a need to consolidate reports and metrics
☐ Time to market is a critical success factor
☐ Total project costs are too high

(continued on next slide)

Figure 13-02

Reasons (continued)

- ☐ The resource pool is not aligned with project staffing needs
- ☐ Training is not improving project performance
- ☐ The project staffing process is not effective
- ☐ You have trouble leveraging best practices
- ☐ You don’t have control of the project portfolio
- ☐ There is no consistency in project reporting
- ☐ There are too many resource scheduling conflicts
- ☐ There is a noticeable gap between documented process maturity and actual practice maturity.

Assessment: 6 or more checked boxes – PSO highly advised

10 or more checked boxes – PSO a necessity

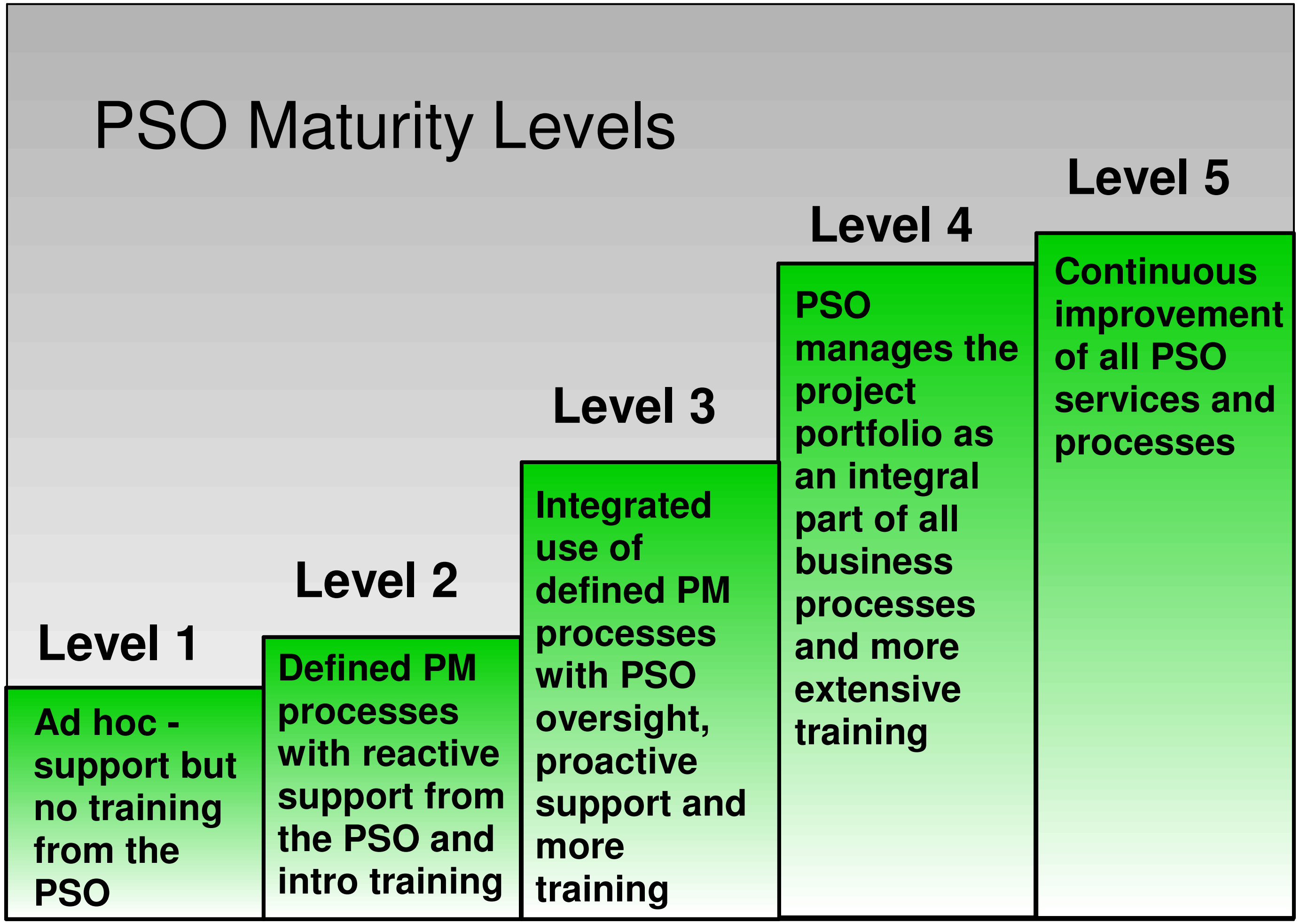
Figure 13-02

Ch13: Establishing & Maturing a PSO

Four basic questions to putting a PSO in place

- Where are you?
- Where do you want to go?
- How will you get there?
- How well did you do?

Project Management Maturity Model



PSO Maturity Levels

Level 1

Ad hoc - support but no training from the PSO

Level 2

Defined PM processes with reactive support from the PSO and intro training

Level 3

Integrated use of defined PM processes with PSO oversight, proactive support and more training

Level 4

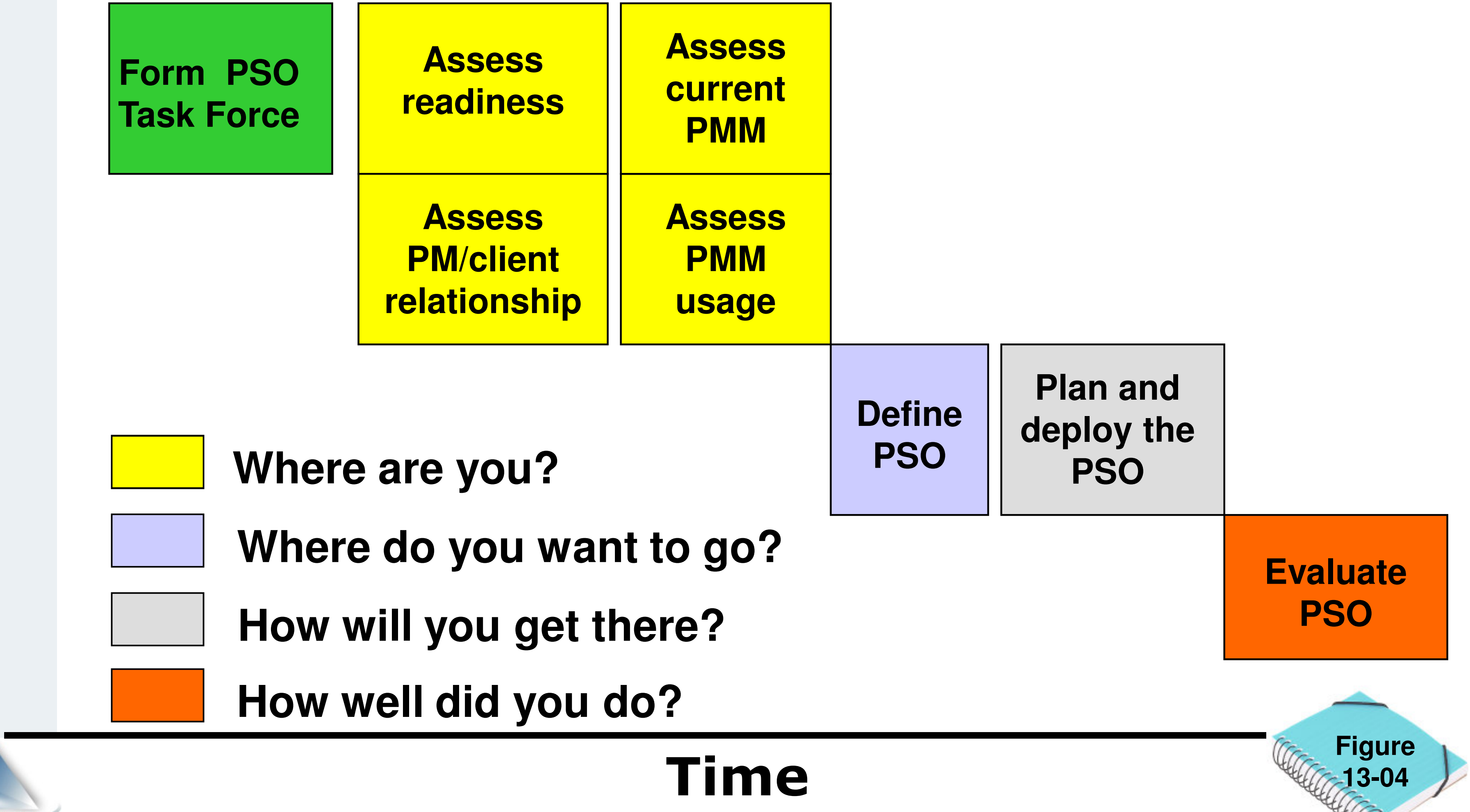
PSO manages the project portfolio as an integral part of all business processes and more extensive training

Level 5

Continuous improvement of all PSO services and processes

Figure 13-03

Planning a PSO



Form PSO Task Force

Assess readiness

Assess current PMM

Assess PM/client relationship

Assess PMM usage

Define PSO

Plan and deploy the PSO

Evaluate PSO

🟨 Where are you?

🟪 Where do you want to go?

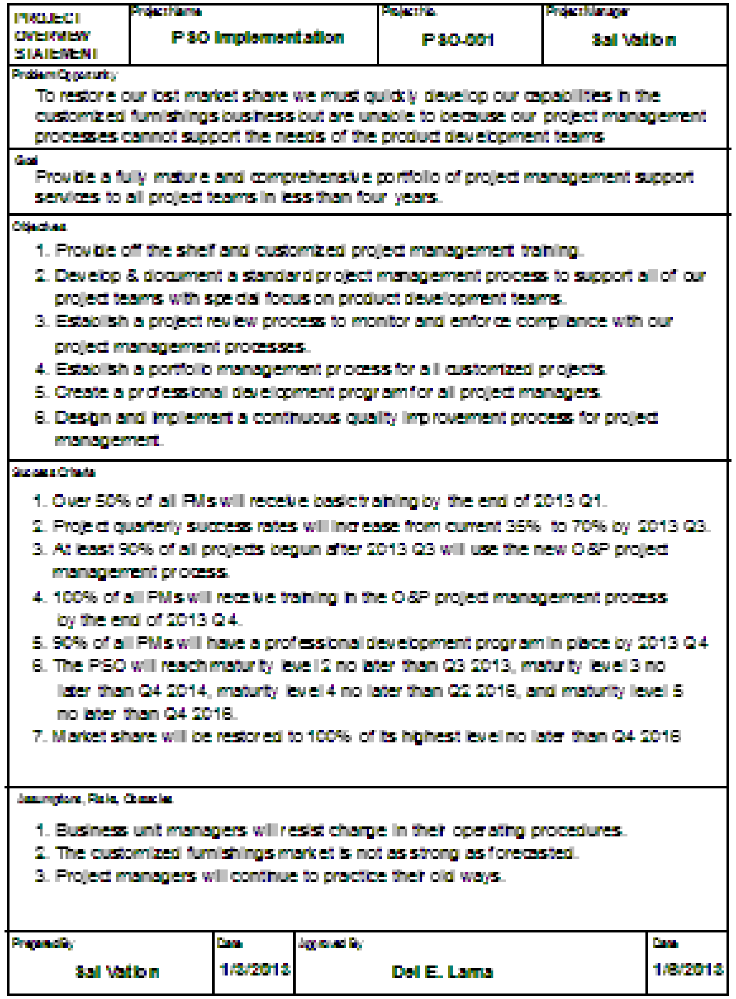
⬜ How will you get there?

🟧 How well did you do?

Time

Figure 13-04

Example POS to establish a PSO



PROJECT OVERVIEW STATEMENT	Project Name **PSO Implementation**	Project No. **PSO-001**	Project Manager **Sal Vation**

Problem/Opportunity

To restore our lost market share we must quickly develop our capabilities in the customized furnishings business but are unable to because our project management processes cannot support the needs of the product development teams

Goal

Provide a fully mature and comprehensive portfolio of project management support services to all project teams in less than four years.

Objectives

1. Provide off the shelf and customized project management training.
2. Develop & document a standard project management process to support all of our project teams with special focus on product development teams.
3. Establish a project review process to monitor and enforce compliance with our project management processes.
4. Establish a portfolio management process for all customized projects.
5. Create a professional development program for all project managers.
6. Design and implement a continuous quality improvement process for project management.

Success Criteria

1. Over 50% of all PMs will receive basic training by the end of 2013 Q1.
2. Project quarterly success rates will increase from current 35% to 70% by 2013 Q3.
3. At least 90% of all projects begun after 2013 Q3 will use the new OSP project management process.
4. 100% of all PMs will receive training in the OSP project management process by the end of 2013 Q4.
5. 90% of all PMs will have a professional development program in place by 2013 Q4
6. The PSO will reach maturity level 2 no later than Q3 2013, maturity level 3 no later than Q4 2014, maturity level 4 no later than Q2 2016, and maturity level 5 no later than Q4 2016.
7. Market share will be restored to 100% of its highest level no later than Q4 2016

Assumptions, Risks, Obstacles

1. Business unit managers will resist change in their operating procedures.
2. The customized furnishings market is not as strong as forecasted.
3. Project managers will continue to practice their old ways.

Prepared By **Sal Vation**	Date **1/3/2013**	Approved By **Del E. Lama**	Date **1/8/2013**

Figure 13-05

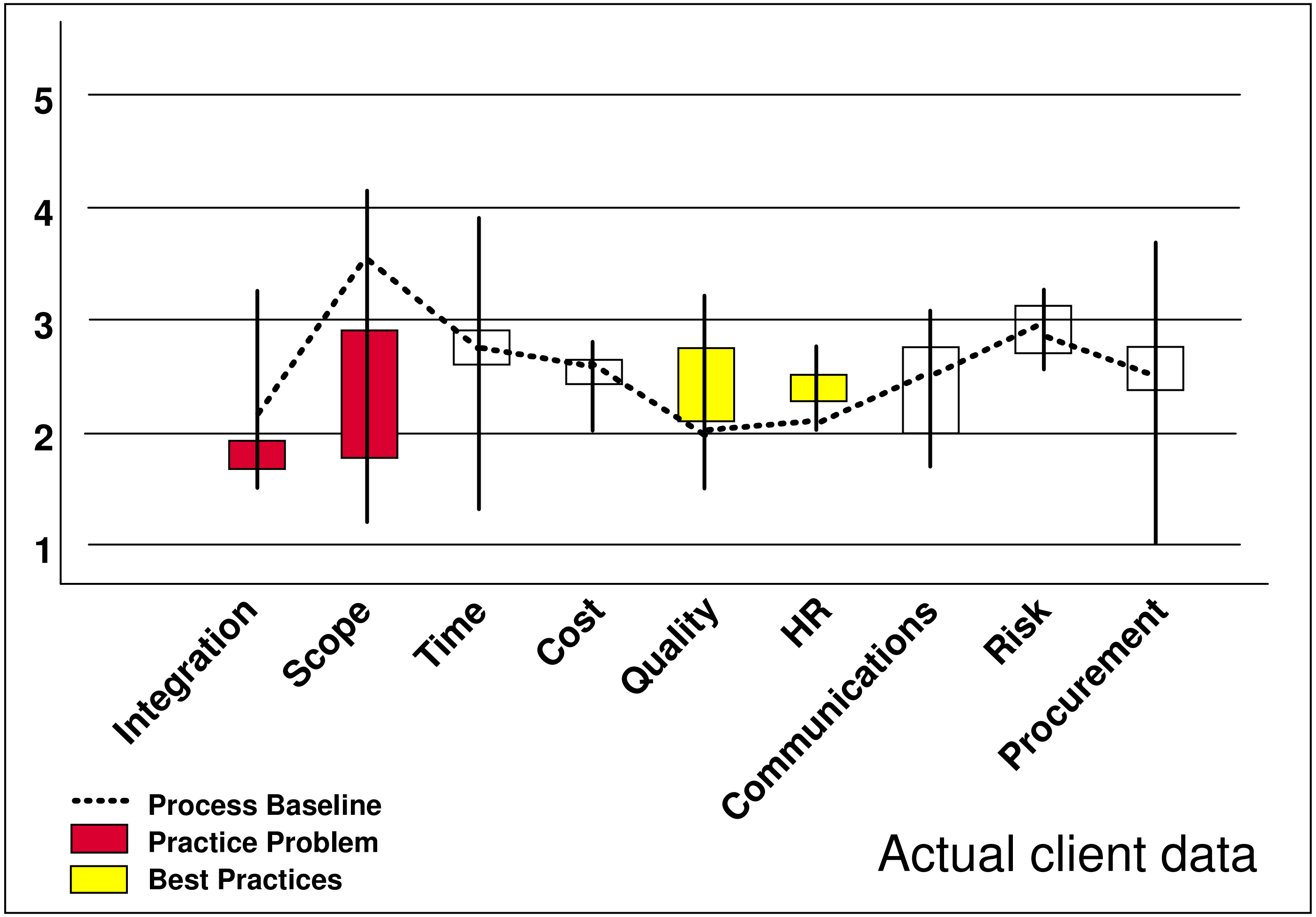
Ch13: Establishing & Maturing a PSO

Where are you? – Questions to be answered

- How many projects are typically underway at one time?
- What are the major reasons for project failure?
- How many PMs have had project management training?
- How is PM competency documented?
- Is there a formal PM career path?
- How many PMs are there at each skill level?
- What are the organization’s project management needs?

Ch13: Establishing & Maturing a PSO

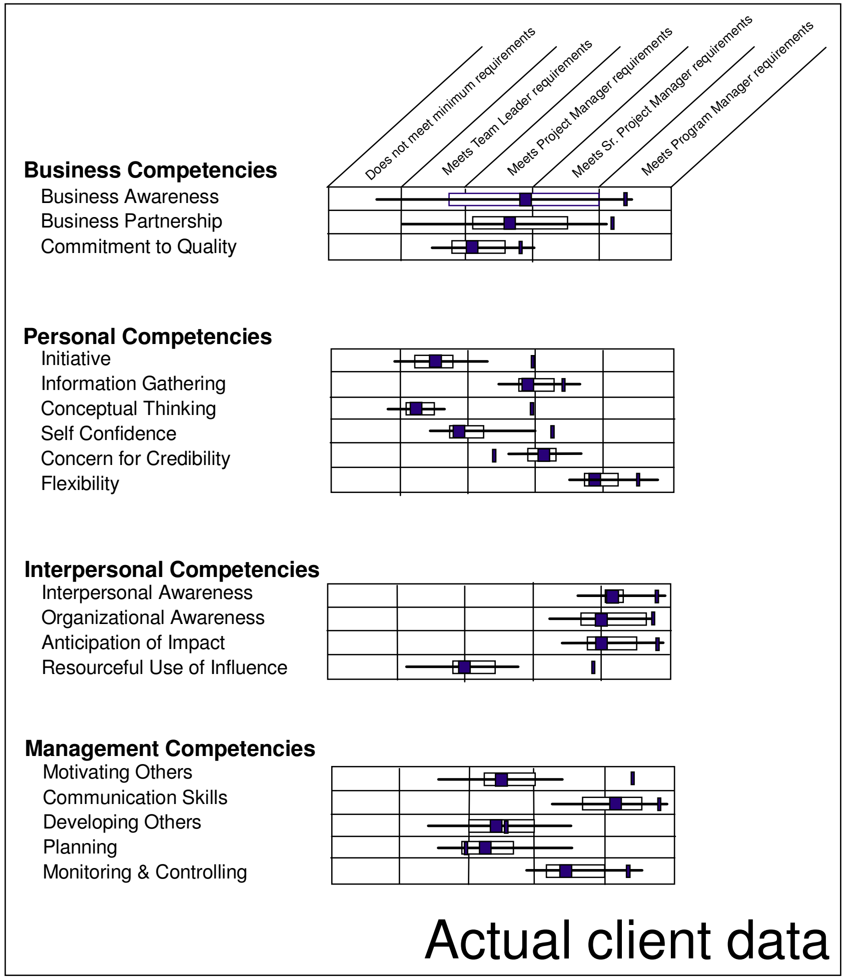
Where are you? – Process & Practice Maturity



Actual client data

Figure 13-06

Where are you? – PM competency



Actual client data

Figure 13-07

Where do you want to go?

What will be its mission?

↓

What services will it offer?

↓

What will be its organizational structure?

↓

How will it be staffed?

↓

What will it be called?

Where do you want to go?

What will be its mission?

To provide the project management services and support needed to establish a market leadership position for the organization in the customized church furnishings business

Table 13-01

Where do you want to go?

What support services will it offer?

1. All project administrative services
2. Project management processes to support all project types
3. Comprehensive software for all phases of product development
4. A customized and complete PM training curriculum
5. A revolving staff of consulting project managers
6. A professional development program for project managers

Table 13-01

Where do you want to go?

How will it be organized and staffed?

1. An enterprise-wide unit attached to the president’s office
2. EPSO director will be a three-year renewable appointed position
3. Permanent staff consists of:
    1. Project administrator to deliver support services
    2. Manager of methods and tools
    3. Senior project management consultant
    4. Project manager consultant
    5. Curriculum development specialist
    6. Senior trainer
    7. Trainer

Table
13-01

Ch13: Establishing & Maturing a PSO

How well did you do?

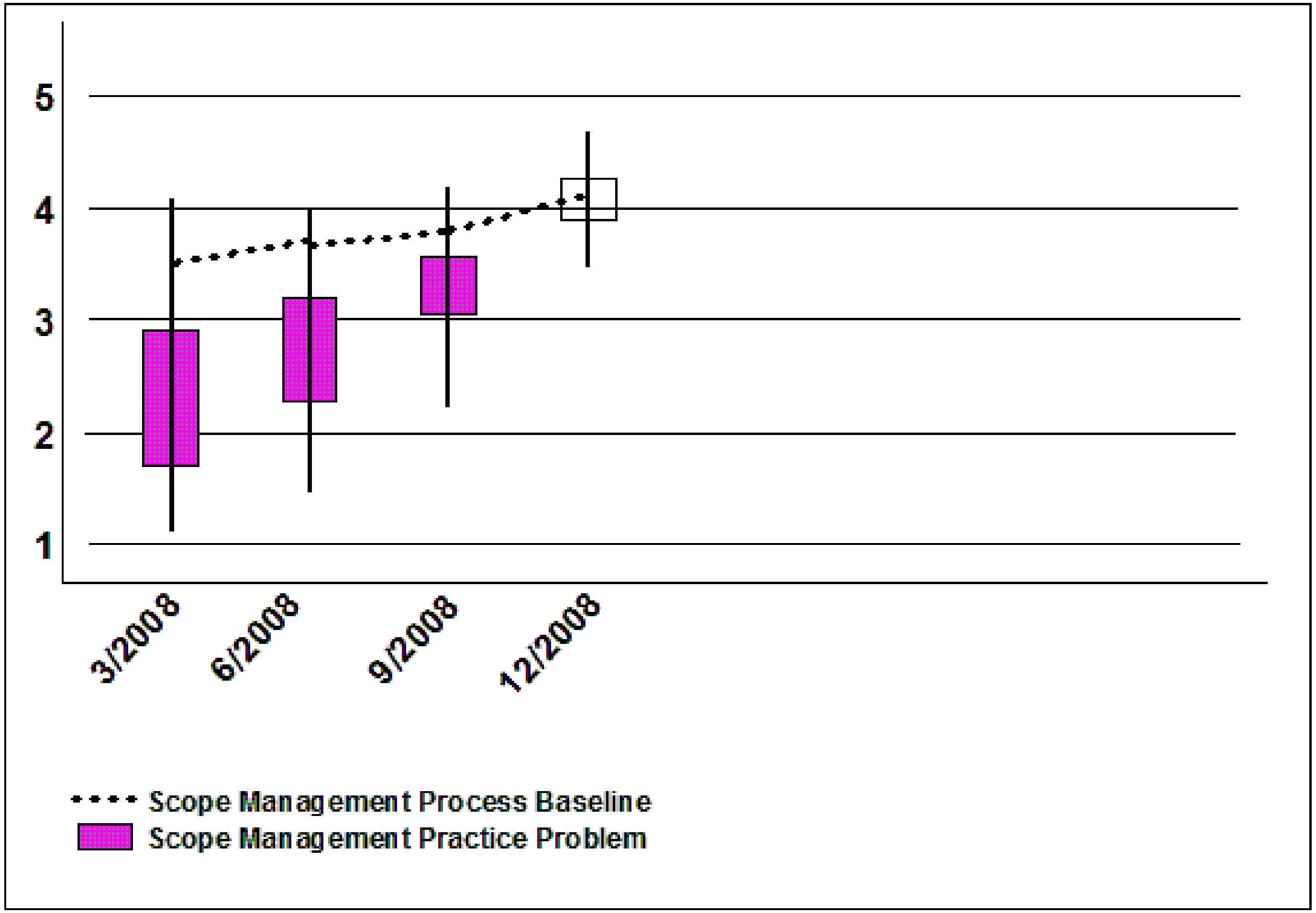


Figure 13-08

Ch13: Establishing & Maturing a PSO

How will you get there? – Typical steps in the plan

- Document the current/desired end state and migration path
- Document/implement Project Management Methodology (PMM)
- Design and deploy a portfolio life cycle management process
- Measure PMM maturity at the process and practice levels
- Design and deploy a scorecard for tracking PSO performance levels
- Design and deploy a scorecard for tracking portfolio performance
- Design and deploy a PSO process improvement program
- Identify and remove barriers to PSO success
- Design and deploy an HR System to balance PM supply and demand
- Assess PM skill and competency gaps and resolve them through training, on-the-job and off-the-job experience, and professional activities

How will you get there? – Moving up the maturity levels

Current PSO maturity level	Characteristics of PSOs at this maturity level	Initiatives that will move the PSO to the next maturity level
INITIAL (1)	• Some defined PM processes are available • Informal support to teams as requested • No PM training is available	• Assemble a task force to establish a PM process • Document the PM process • Make PM training available
REPEATABLE (2)	• A documented PM process is in place • Part-time support to teams available • Limited PM training is available	• Establish programs to increase PM process usage • Establish a fulltime PSO staff to support teams • Monitor and enforce compliance • Increase available PM training
DEFINED (3)	• Fully documented and supported PM process • Full time support to teams is available • All project teams are using the PM process • PM processes are integrated with other processes • More extensive PM training is available	• Projects are made part of the business plan • Put project portfolio management in the PSO • Give the PSO an active role in project staffing • Offer more extensive training • Create a career development program in the PSO • Staff project managers in the PSO
MANAGED (4)	• PSO responsible for professional development • Complete PM training is available • Project portfolio is managed as a business	• PSO begins to identify and adopt best practices • Metrics are defined to track process quality • Project reviews are used to monitor compliance
OPTIMIZING (5)	• A continuous improvement process is in place • There is measured improvement in project success	

Figure 13-09

How will you get there? – Moving up the maturity levels

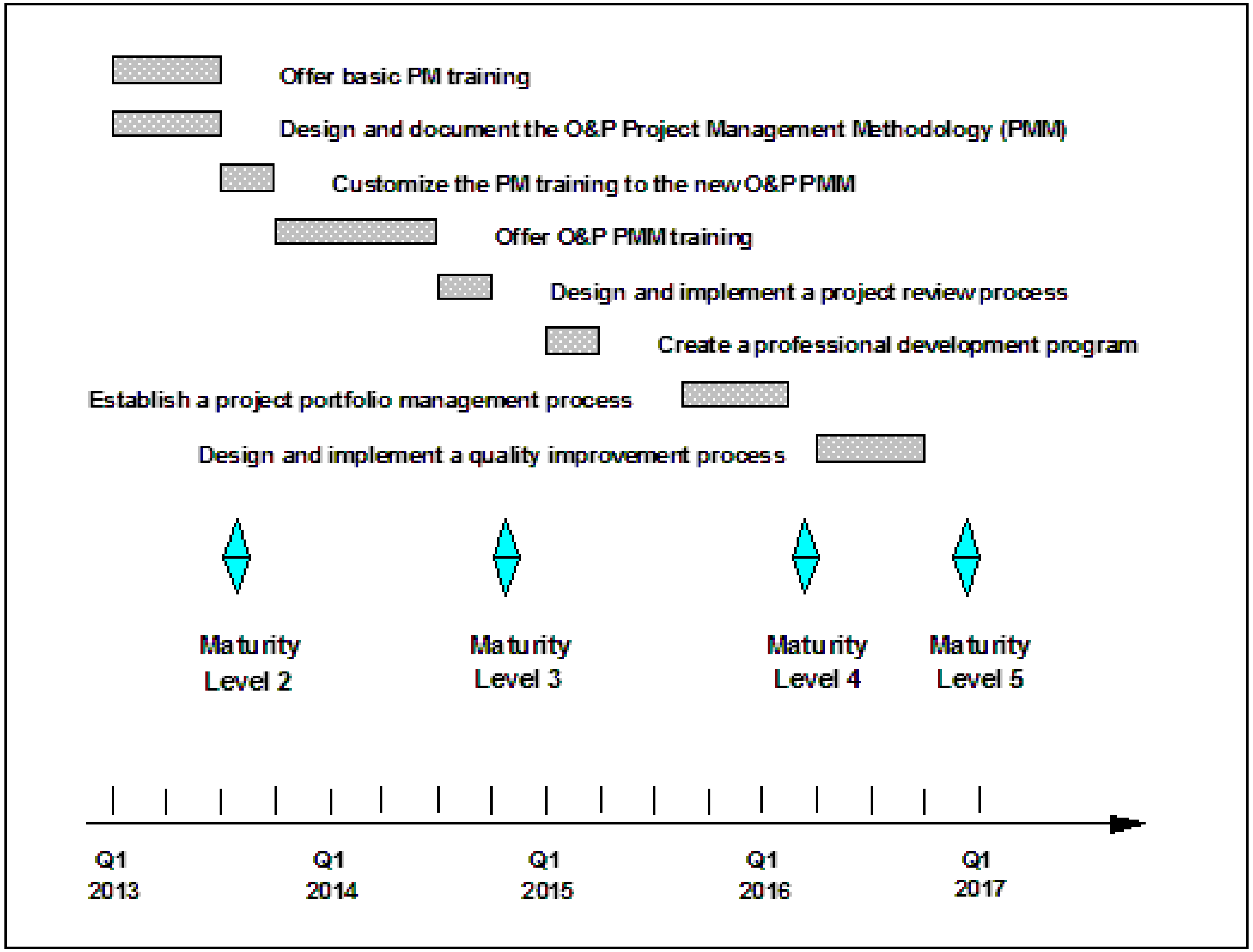


Figure 13-10

Ch13: Establishing & Maturing a PSO

Challenges to Implementing a PSO

- Speed & patience
- Leadership from the bottom up
- A systems-thinking perspective
- Enterprise-wide systems
- Knowledge management
- Learning and learner project organizations
- Open communications

Organizational Structure – Hub & Spoke BP^{4}SO

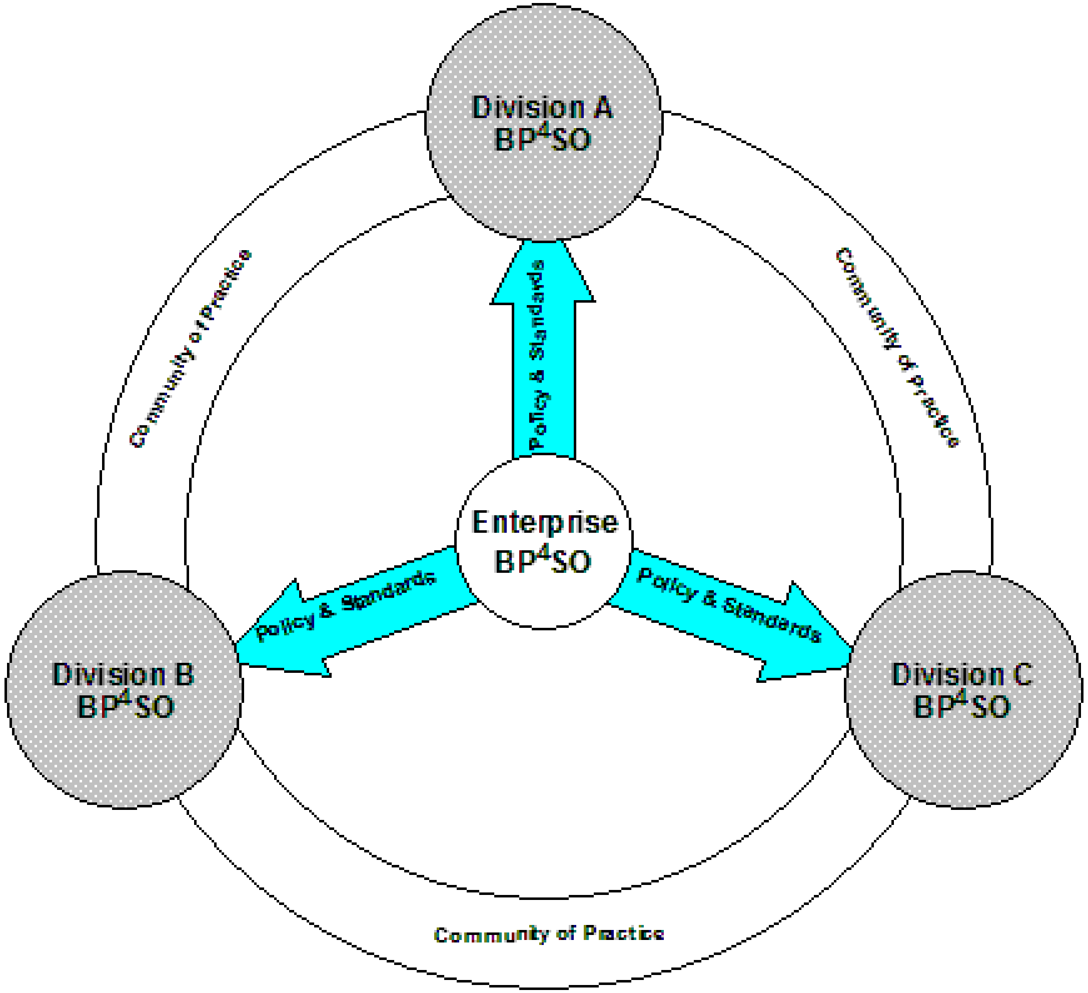


Figure 13-11

Staffing the BP^{4}SO

- Virtual BP^{4}SO
- PMs are assigned to the BP^{4}SO on a rotating basis
- All PMs permanently assigned to the BP^{4}SO
- PMs assigned only at the division level
- PMs assigned only at the department level

Staffing the BP^{4}SO – Rotating project managers

- They maintain a professional relationship and credibility with their peers in their home department.
- They seed their home business unit with practices and techniques used elsewhere in the enterprise BP^{4}SO and the division-level BP^{4}SOs.
- When they return to a BP^{4}SO, they bring best practices back from their home business unit and pick up some clues about improving existing tools, templates, and processes.

Staffing the BP^{4}SO – Other Considerations

- Portfolio support
- Assigning project managers
- Career and professional development of project managers

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch14: Establishing & Managing a Project Portfolio Management Process

Presented by
(facilitator name)

Ch14: Establishing & Managing a PPMP

Summary of Chapter 14

- Introduction to Project Portfolio Management
- Project Portfolio Management Life Cycle
- Roles and Responsibilities of the PSO in Portfolio Management
- Preparing your Project for Submission to the Portfolio Management Process
- Agile Project Portfolio Management

What is a Project Portfolio?

A project portfolio is a collection of projects that share some common link to one another.

Examples:

- Same business unit
- Part of the same program
- Maintenance projects
- Capital equipment projects
- All are new product development
- Funded out of the same budget
- Staffed from the same resource pool

What is Project Portfolio Management?

Project portfolio management includes:

- Establishing the investment strategy of the portfolio
- Determining what types of projects can be incorporated in the portfolio
- Evaluating and prioritizing proposed projects
- Constructing a balanced portfolio that will achieve the investment objectives
- Monitoring the performance of the portfolio
- Adjusting the contents of the portfolio in order to achieve the desired results

Project Portfolio Management Life Cycle

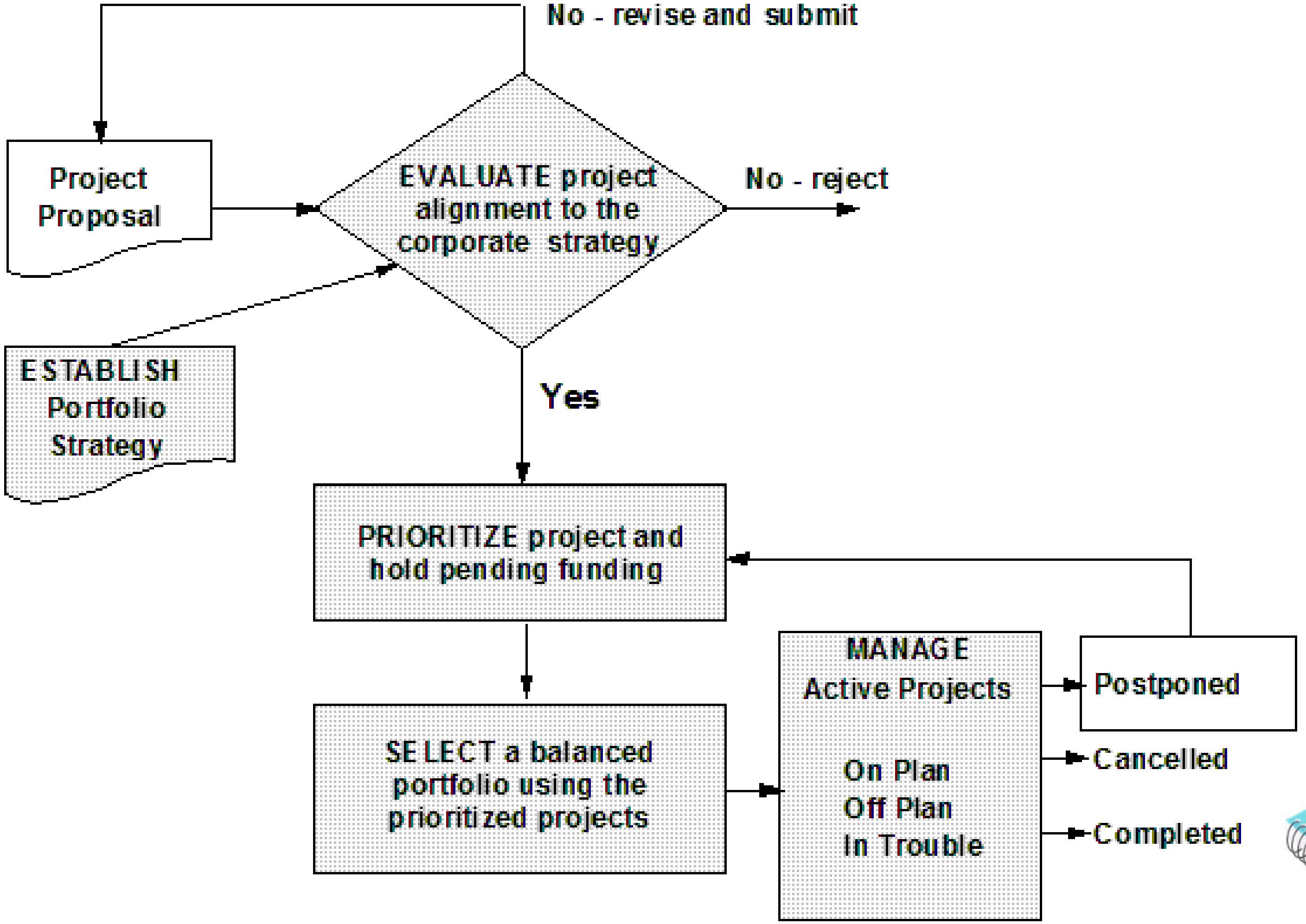

No - revise and submit
Project Proposal
EVALUATE project alignment to the corporate strategy
No - reject
ESTABLISH Portfolio Strategy
Yes
PRIORITIZE project and hold pending funding
SELECT a balanced portfolio using the prioritized projects
MANAGE Active Projects
On Plan
Off Plan
In Trouble
Postponed
Cancelled
Completed

Figure 14-01

Stages of a project throughout its life cycle

- Proposed
- Aligned
- Prioritized
- Selected
- Active
- Postponed
- Canceled
- Completed

Ch14: Establishing & Managing a PPMP

ESTABLISH a Portfolio Strategy

- Strategic Alignment Model
- Boston Consulting Group Product/Service Matrix
- Project Distribution Matrix
- Growth versus Survival Model
- Project Investment Categories

Strategic Alignment Model

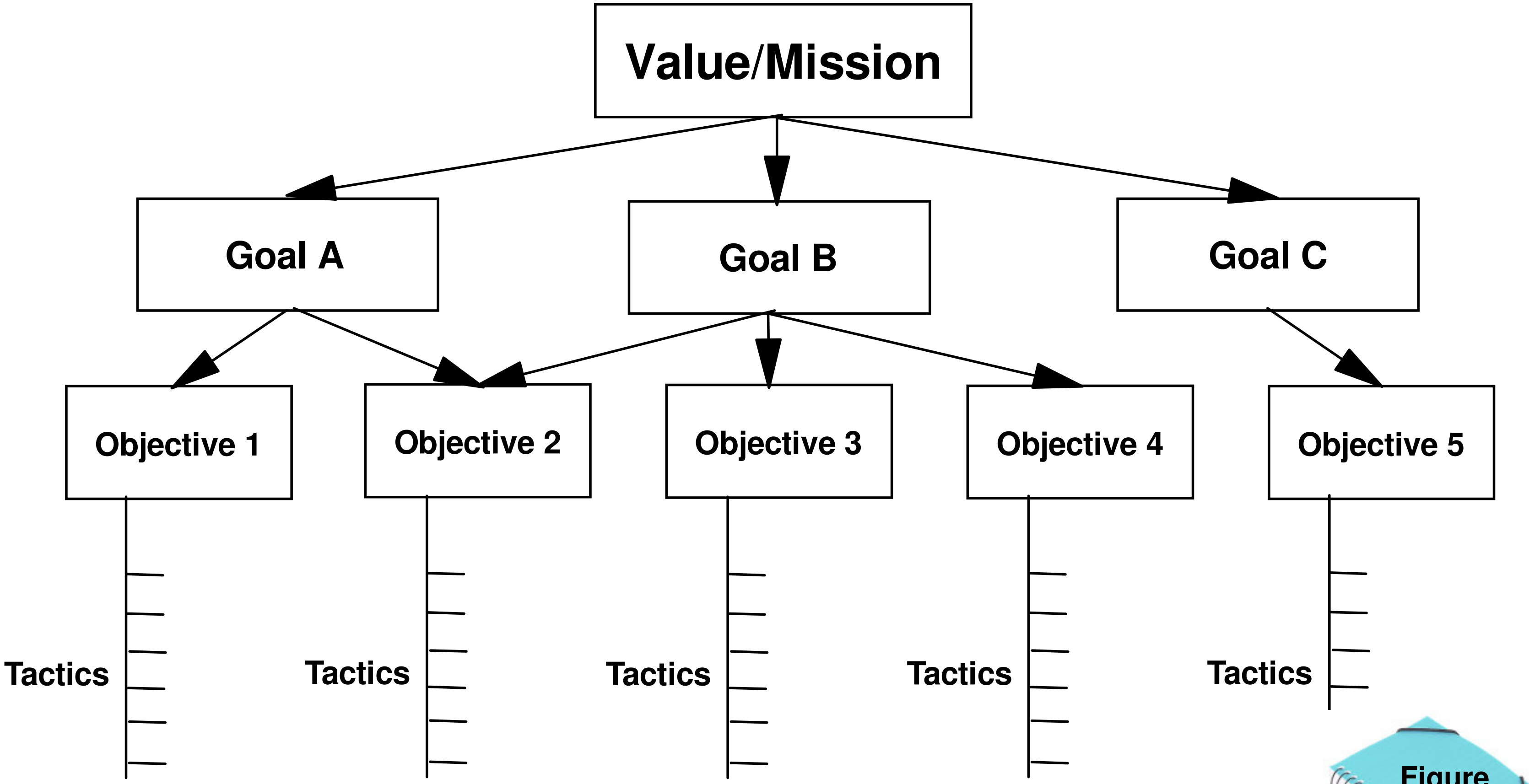


Figure 14-02

Questions about the Strategic Alignment Model

- What process will you follow to allocate your budget?
- What variables might influence your decision?
- In what way?
- Does this work at both the enterprise and business unit level?

Boston Consulting Group Products/Services Matrix

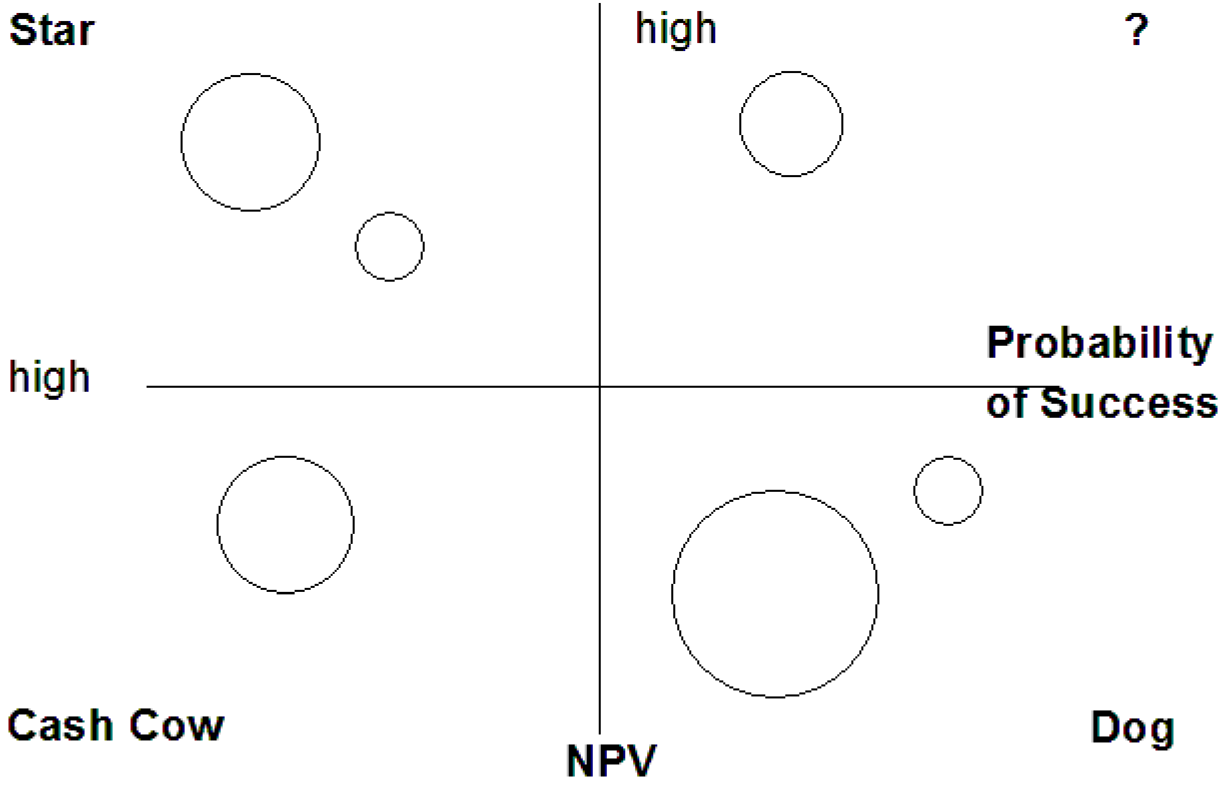


Figure 14-03

Questions about the Product Services Matrix

- What process will you follow to allocate your budget?
- What variables might influence your decision?
- In what way?
- How might your specific role change your choice?
- Does this work at both the enterprise and business unit level?

Project Distribution Matrix

Project Focus	New	Enhanced	Maintained
Strategic			
Tactical			
Operational			

Figure 14-04

Questions about the Project Distribution Matrix

- What process will you follow to allocate your budget?
- What variables might influence your decision?
- In what way?
- How might your specific role change your choice?
- Does this work at both the enterprise and business unit level?

Ch14: Establishing & Managing a PPMP

Projects are focused on either….

Growth

OR

Survival

Questions about the Growth vs. Survival Model

- ❖ What process will you follow to allocate your budget?
- ❖ What variables might influence your decision?
- ❖ In what way?
- ❖ How might your specific role change your choice?
- ❖ Does this work at both the enterprise and business unit level?

Project Investment Categories

- Infrastructure
- Maintenance
- New Products
- Research

Questions about the Project Investment Categories

- What process will you follow to allocate your budget?
- What variables might influence your decision?
- In what way?
- How might your specific role change your choice?
- Does this work at both the enterprise and business unit level?

Ch14: Establishing & Managing a PPMP

Choosing where to apply these models

- Corporate Level
- Functional Level

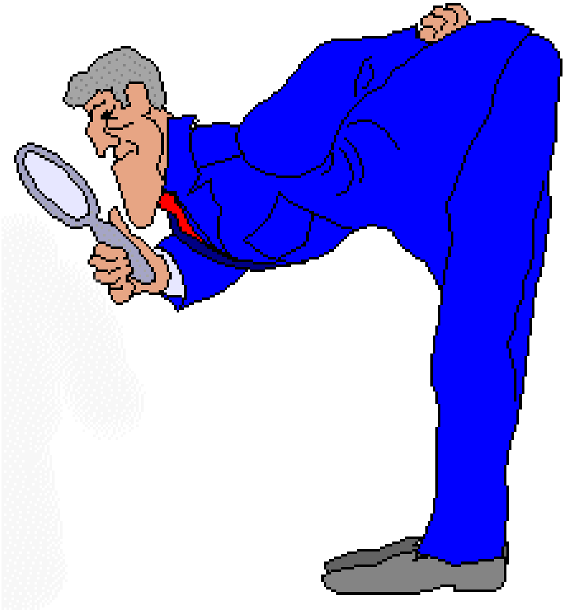
EVALUATE Project Alignment to the Portfolio Strategy

- What types of data will we need in order to EVALUATE, PRIORITIZE, and SELECT projects for the portfolio?
- Who is responsible for providing that data?
- Who is responsible for analyzing this data?

EVALUATE Project Alignment to the Portfolio Strategy

The proposal alignment decision can be done:

- By the person proposing the project
- By a proposal intake person in the PSO



PRIORITIZE Project Alignment to the Portfolio Strategy

Non-Numeric

- Forced Ranking
- Q-Sort
- Must Do – Should Do - Postpone

Numeric

- Criteria Weighting
- Paired Comparison
- Risk/Benefit

Forced Ranking

Project #	A	B	C	D	E	F	Rank Sum	Forced Rank
1	2	5	3	2	1	6	19	2
2	4	3	2	7	9	10	35	6
3	7	4	9	8	6	3	37	7
4	1	8	5	1	2	2	19	3
5	3	6	8	4	7	5	33	5
6	8	9	10	9	10	8	54	9
7	5	1	1	3	3	4	17	1
8	6	2	4	5	4	1	22	4
9	10	10	7	10	8	9	54	10
10	9	7	6	6	5	7	40	8

Table 14-01

Q-Sort

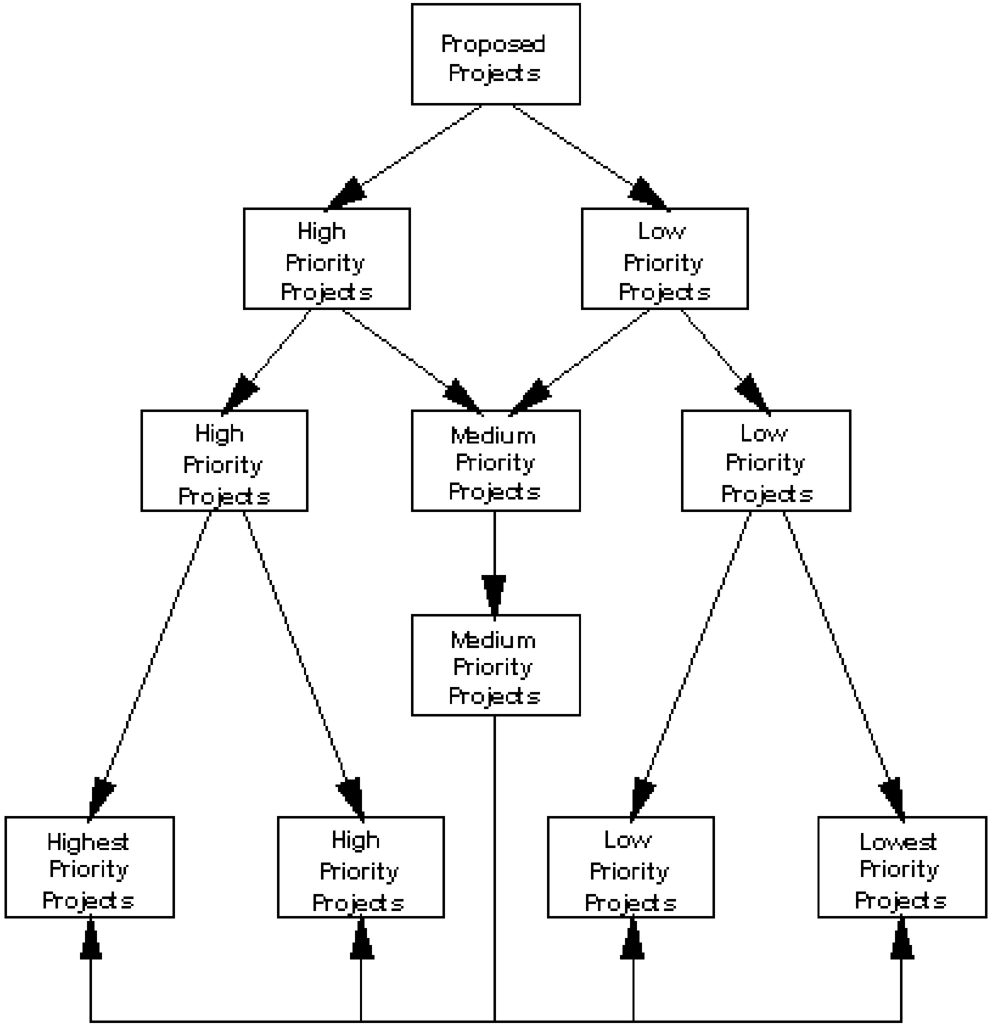


Figure 14-05

Must Do – Should Do - Postpone

Must Do:	3, 4, 7
Should Do:	1, 2, 5, 8
Postpone:	6, 9, 10

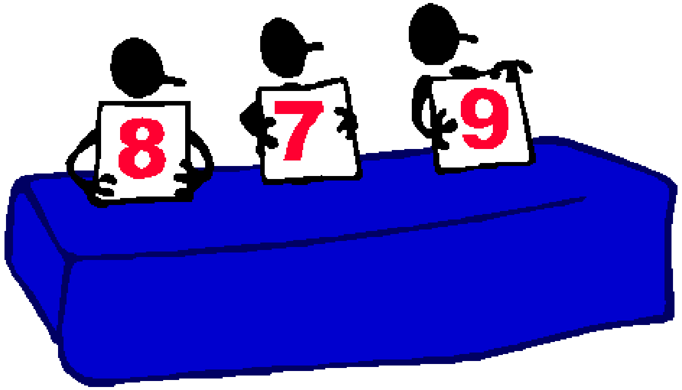
Scoring Model: Criteria Weighting

Criteria	Criteria Weight	Very Good (8)	Good (6)	Fair (4)	Poor (2)	Very Poor (0)	Expected Level Weight	Expected Weighted Score
Fit to Mission	10	1.0					8.0	80.0
Fit to Objectives	10	0.2	0.6	0.2			6.0	60.0
Fit to Strategy	10			1.0			4.0	40.0
Contribute to Goal A	8				1.0		2.0	16.0
Contribute to Goal B	6	0.2	0.8				6.4	38.4
Contribute to Goal C	4		0.5	0.5			5.0	20.0
Uses Strengths	10				0.6	0.4	1.2	12.0
Uses Weaknesses	10	0.7	0.3				7.4	74.0
								340.4

Figure 14-06

Scoring Model: Criteria Weighting Scores

Project #	Score		Project #	Score
1	300.2		6	178.8
2	226.4		7	340.4
3	200.0		8	265.8
4	320.6		9	172.6
5	270.0		10	198.2



Scoring Model: Criteria Weighting

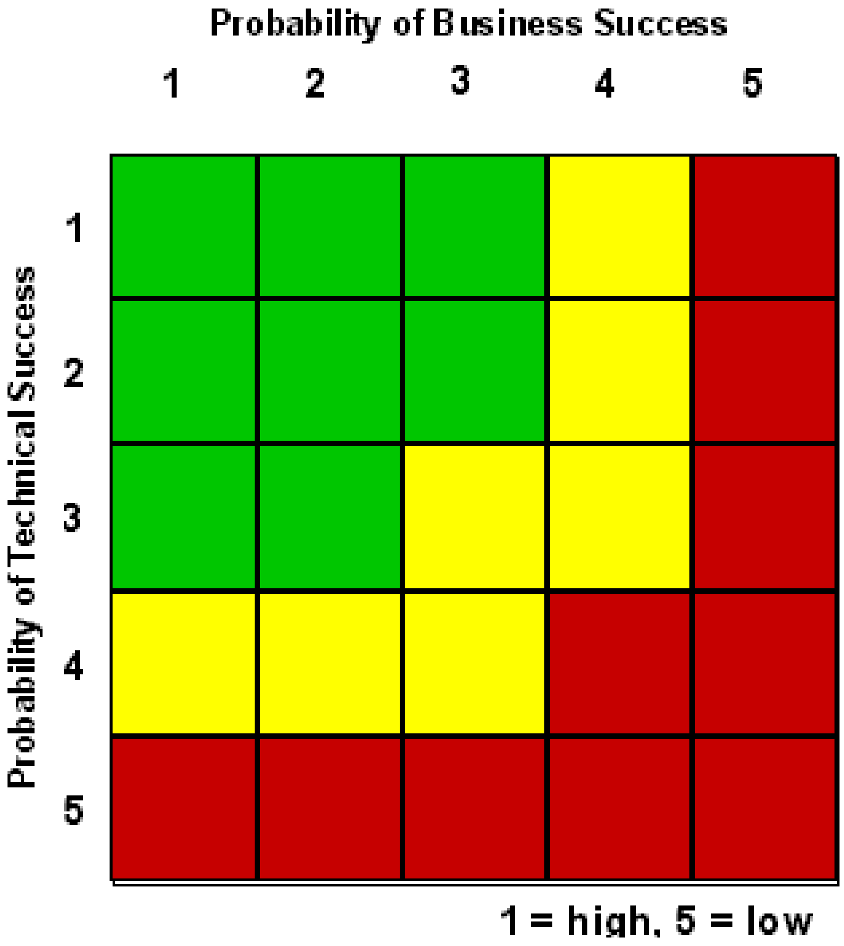
- How might the Criteria Weighting Model be adapted to your organization?

Scoring Model: Paired Comparisons

	1	2	3	4	5	6	7	8	9	10	SUM	RANK
1	X	1	1	0	1	1	0	1	1	1	7	2
2	0	X	0	0	1	1	0	0	1	1	4	6
3	0	1	X	0	0	1	0	0	1	1	4	5
4	1	1	1	X	1	1	0	0	1	1	7	2
5	0	0	1	0	X	1	0	0	1	0	3	7
6	0	0	0	0	0	X	0	0	1	1	2	8
7	1	1	1	1	1	1	X	1	1	1	9	1
8	0	1	1	1	1	1	0	X	1	1	7	2
9	0	0	0	0	0	0	0	0	X	0	0	10
10	0	0	0	0	1	0	0	0	1	X	2	9

Figure 14-07

Scoring Model: Risk/Benefit



Probability of Business Success

Probability of Technical Success

	1	2	3	4	5
1	🟩	🟩	🟩	🟨	🟥
2	🟩	🟩	🟩	🟨	🟥
3	🟩	🟩	🟨	🟨	🟥
4	🟨	🟨	🟨	🟥	🟥
5	🟥	🟥	🟥	🟥	🟥

1 = high, 5 = low

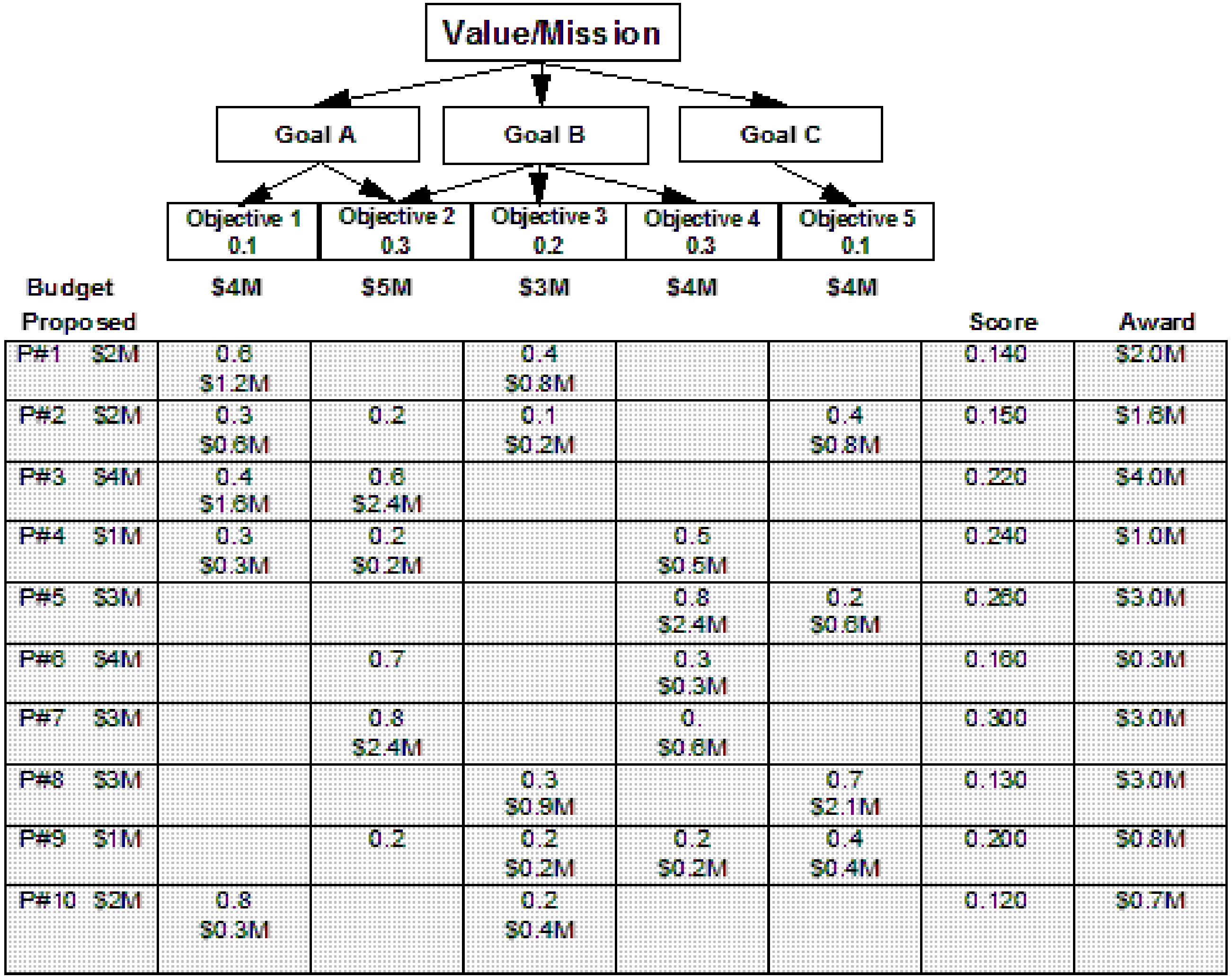
🟩 Fund
🟨 Consider
🟥 Don’t fund

Figure 14-08

Scoring Model: Risk Analysis

- Should this model include a third dimension: Probability of Political Success?

SELECT – Strategic Alignment & Weighted Criteria



Budget Proposed	$4M	$5M	$3M	$4M	$4M	Score	Award
P#1 $2M	0.6 $1.2M		0.4 $0.8M			0.140	$2.0M
P#2 $2M	0.3 $0.6M	0.2	0.1 $0.2M		0.4 $0.8M	0.150	$1.6M
P#3 $4M	0.4 $1.6M	0.6 $2.4M				0.220	$4.0M
P#4 $1M	0.3 $0.3M	0.2 $0.2M		0.5 $0.5M		0.240	$1.0M
P#5 $3M				0.8 $2.4M	0.2 $0.6M	0.260	$3.0M
P#6 $4M		0.7		0.3 $0.3M		0.160	$0.3M
P#7 $3M		0.8 $2.4M		0. $0.6M		0.300	$3.0M
P#8 $3M			0.3 $0.9M		0.7 $2.1M	0.130	$3.0M
P#9 $1M		0.2	0.2 $0.2M	0.2 $0.2M	0.4 $0.4M	0.200	$0.8M
P#10 $2M	0.8 $0.3M		0.2 $0.4M			0.120	$0.7M

Figure
14-09

SELECT – Project Distribution & Forced Ranking

Project Focus	New	Enhanced	Maintained
Strategic	Budget $3M	Budget $3M P#2 $2M P#10 $2M P#6 $4M	Budget $3M
Tactical	Budget $3M P#1 $2M P#4 $1M P#9 $1M	Budget $2M	Budget $1M P#3 $4M
Operational	Budget $1M	Budget $2M P#8 $3M	Budget $2M P#7 $3M P#5 $3M

Figure 14-10

SELECT – Project Distribution & Forced Ranking

Project Focus	New	Enhanced	Maintained
Strategic	Budget $3M	Budget $6M P#2 $2M P#10 $2M P#6 $4M	
Tactical	Budget $4M P#1 $2M P#4 $1M P#9 $1M	Budget $2M	Budget $1M P#3 $4M
Operational		Budget $2M P#8 $3M	Budget $2M P#7 $3M P#5 $3M

Figure 14-11

SELECT – Project Distribution & Forced Ranking

Project Focus	New	Enhanced	Maintained
Strategic	Budget $3M	P#2 $2M P#10 $2M P#6 $2M	
Tactical	P#1 $2M P#4 $1M P#9 $1M	Budget $2M	P#3 $1M
Operational		P#8 $2M	P#7 $2M P#5 $0M

Figure 14-12

SELECT – Graham-Englund Model

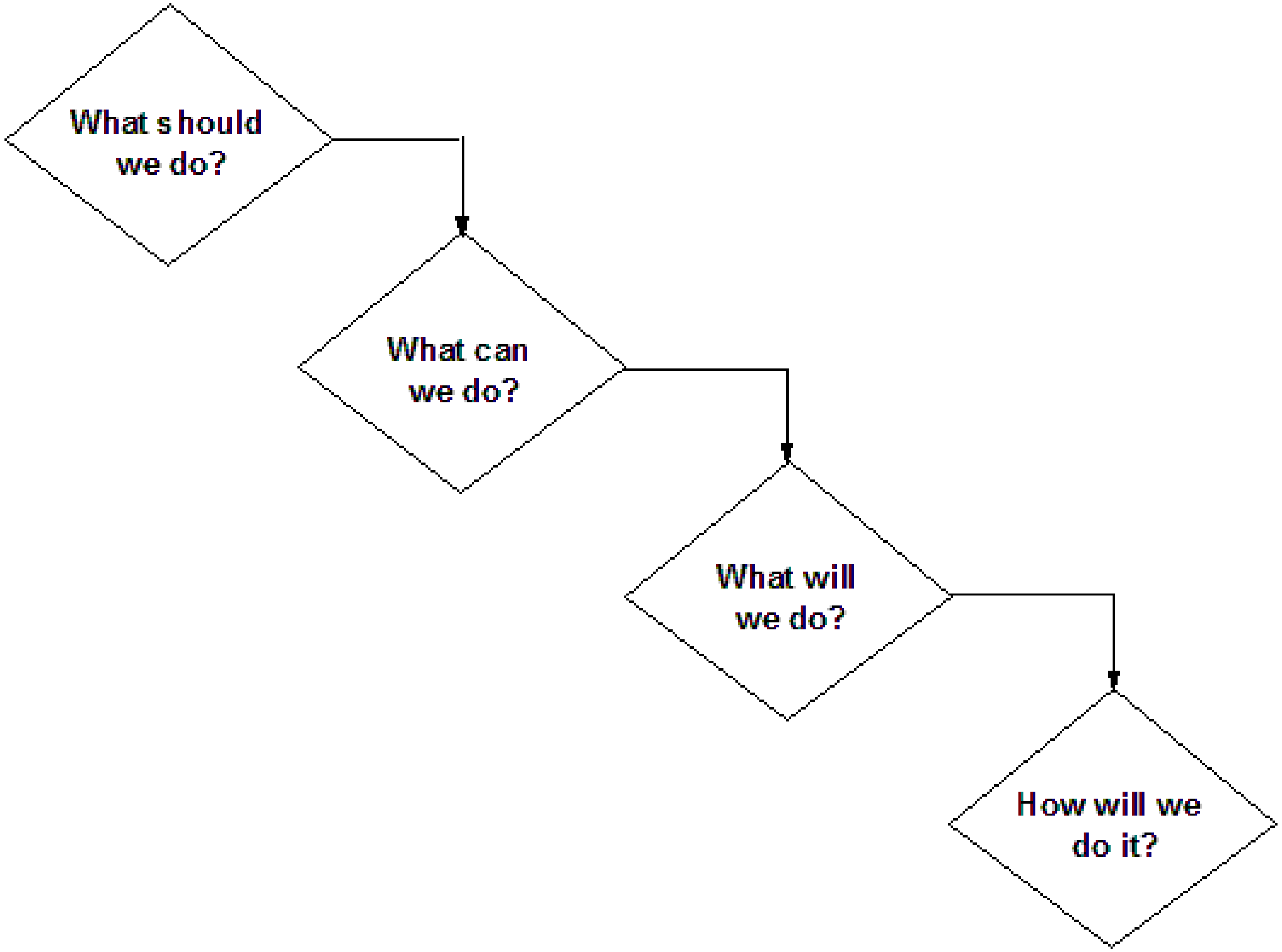


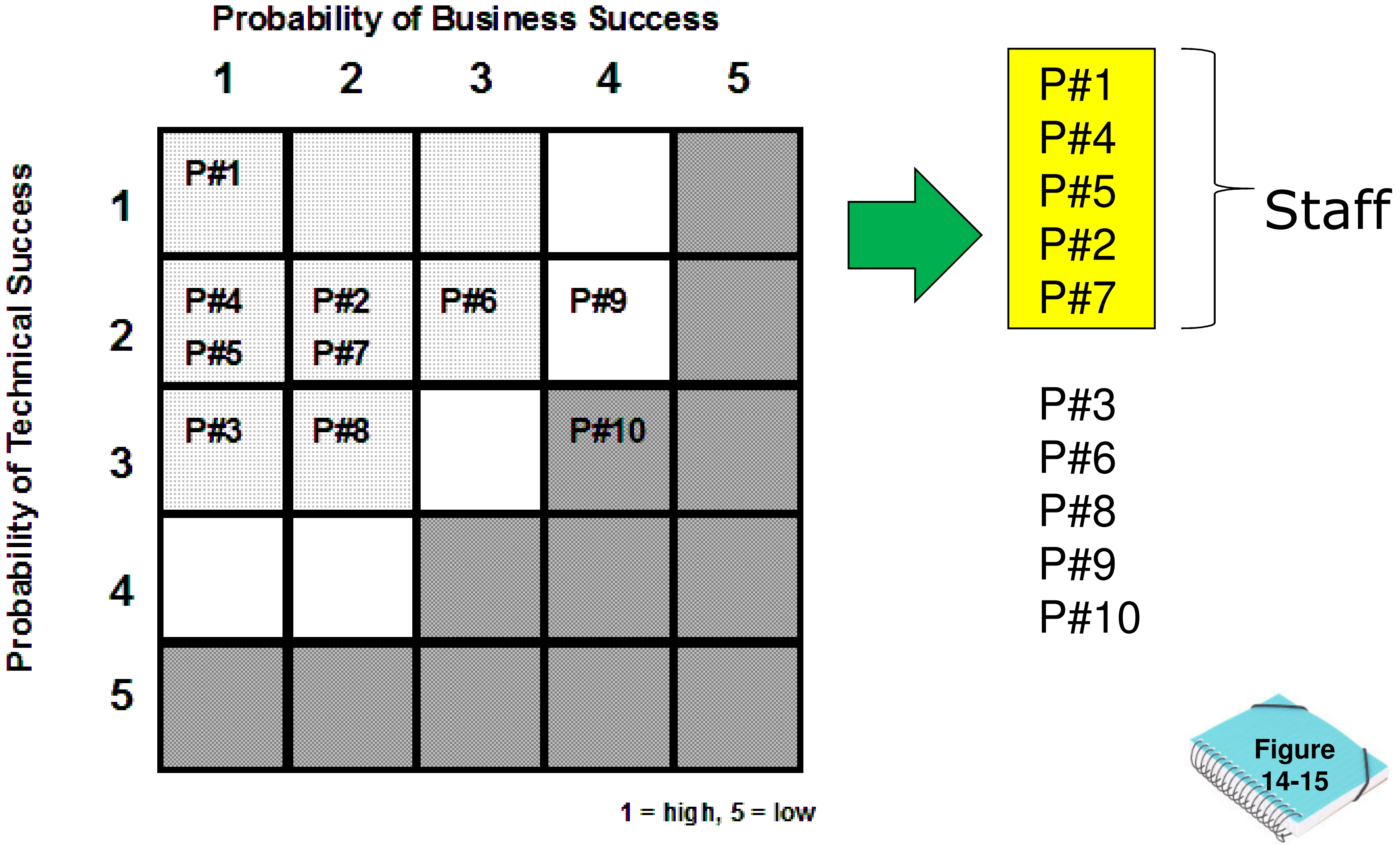
Figure 14-13

SELECT – Project Staffing Requirements

	# Available	P#1 I	P#2 I	P#3 M	P#4 M	P#5 M	P#6 N	P#7 N	P#8 N	P#9 R	P#10 R
Senior Project Manager	2	X					X				
Project Manager	3		X	X				X	X	X	
Associate Project Manager	2				X	X					X
Systems Architect	4	X	X				X	X	X	X	
Database Architect	4	X	X				X	X	X	X	
Senior Programmer	2	X	X				X				
Programmer	3	X	X				X	X	X		
Associate Programmer	2			X	X	X					X
Test Technician	5	X	X	X	X	X	X	X	X		

Figure 14-14

Projects Prioritized Using the Risk/Benefit Matrix



Probability of Business Success

Probability of Technical Success

	1	2	3	4	5
1	P#1				
2	P#4 P#5	P#2 P#7	P#6	P#9	
3	P#3	P#8		P#10	
4					
5					

1 = high, 5 = low

P#1
P#4
P#5
P#2
P#7

Staff

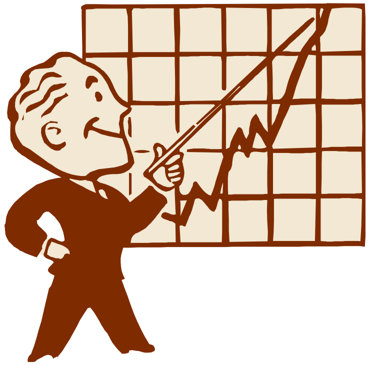
P#3
P#6
P#8
P#9
P#10

Figure 14-15

MANAGE the Active Projects

- Earned Value
  - Schedule Performance Index
  - Cost Performance Index
- Milestone Trend Charts

Earned Value – Basic Performance Indices



Schedule Performance Index (SPI)

A measure of how close the project is to performing work as it was actually scheduled.

SPI = EV/AC

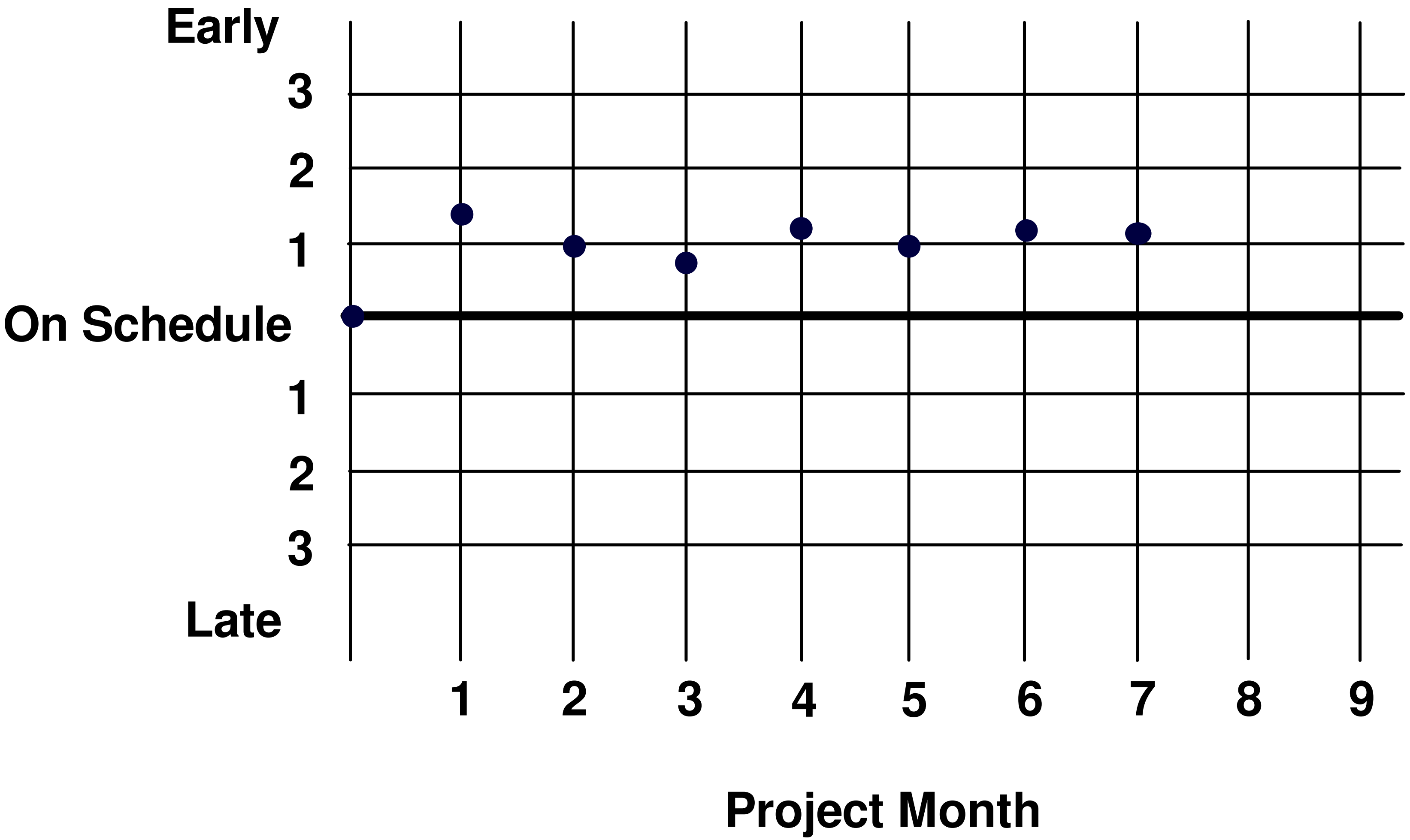
Cost Performance Index (CPI)

A measure of how close the project is to spending on the work performed to what was planned to have been spent.

CPI = EV/PV

INDEX VALUES
< 1: over budget or behind schedule
> 1: under budget or ahead of schedule

Milestone Trend Carts



Earned Value – Example SPI and CPI Trend Chart

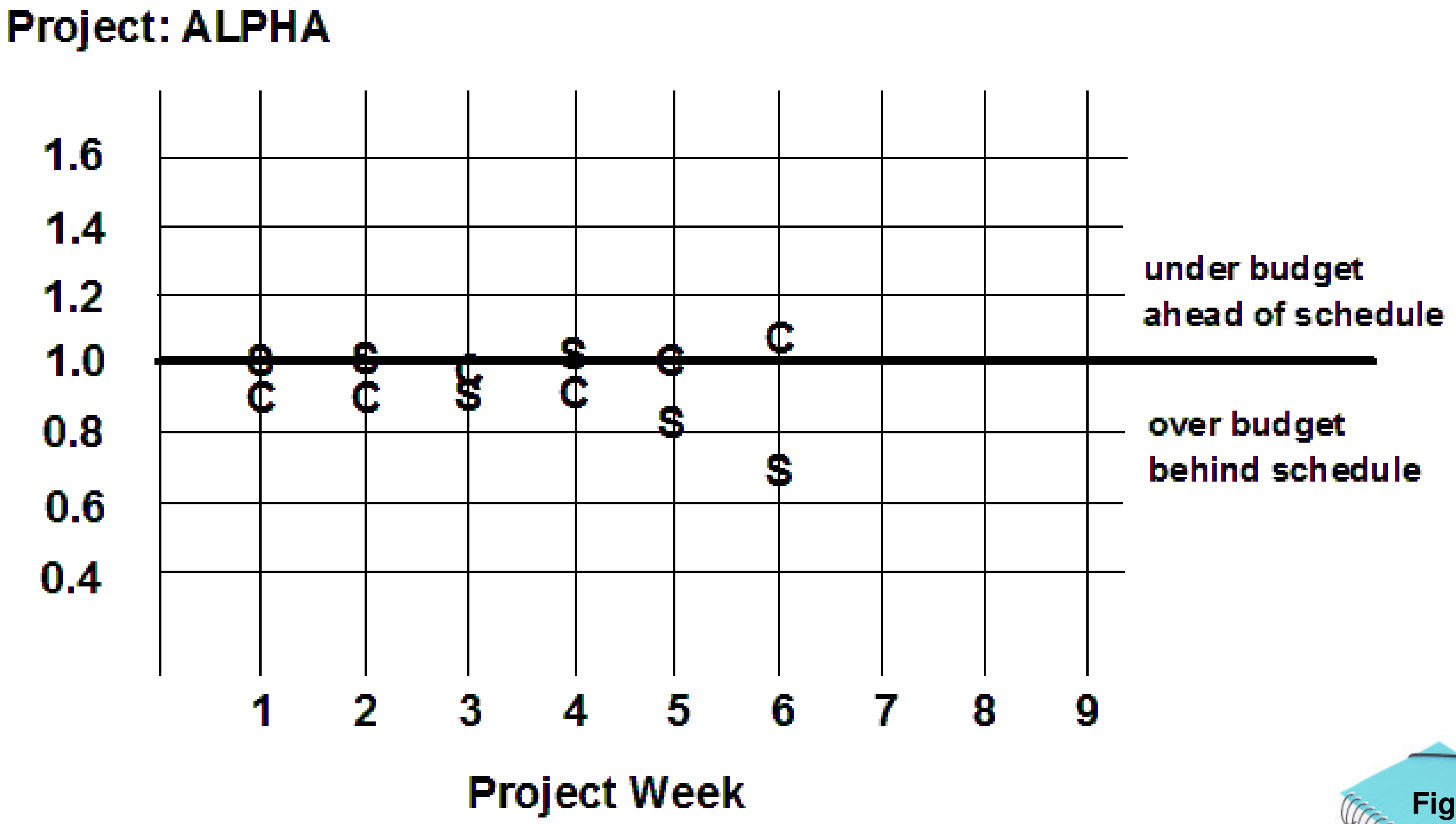


Figure 14-16

Ch14: Establishing & Managing a PPMP

Earned Value – A Run Up or Down of 4 SPI or CPI values

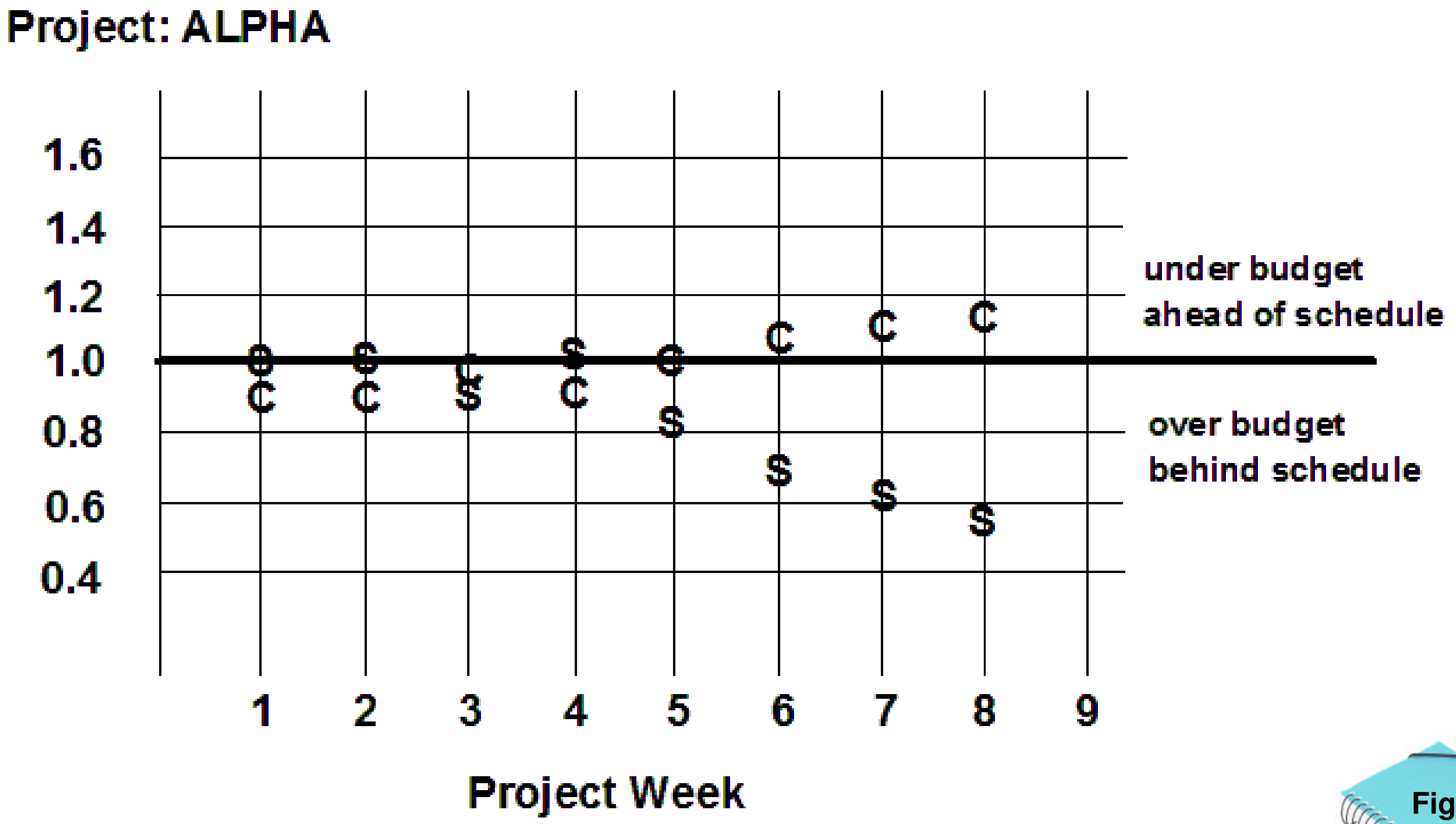


Figure 14-17

Earned Value – 7 or more values above or below 1

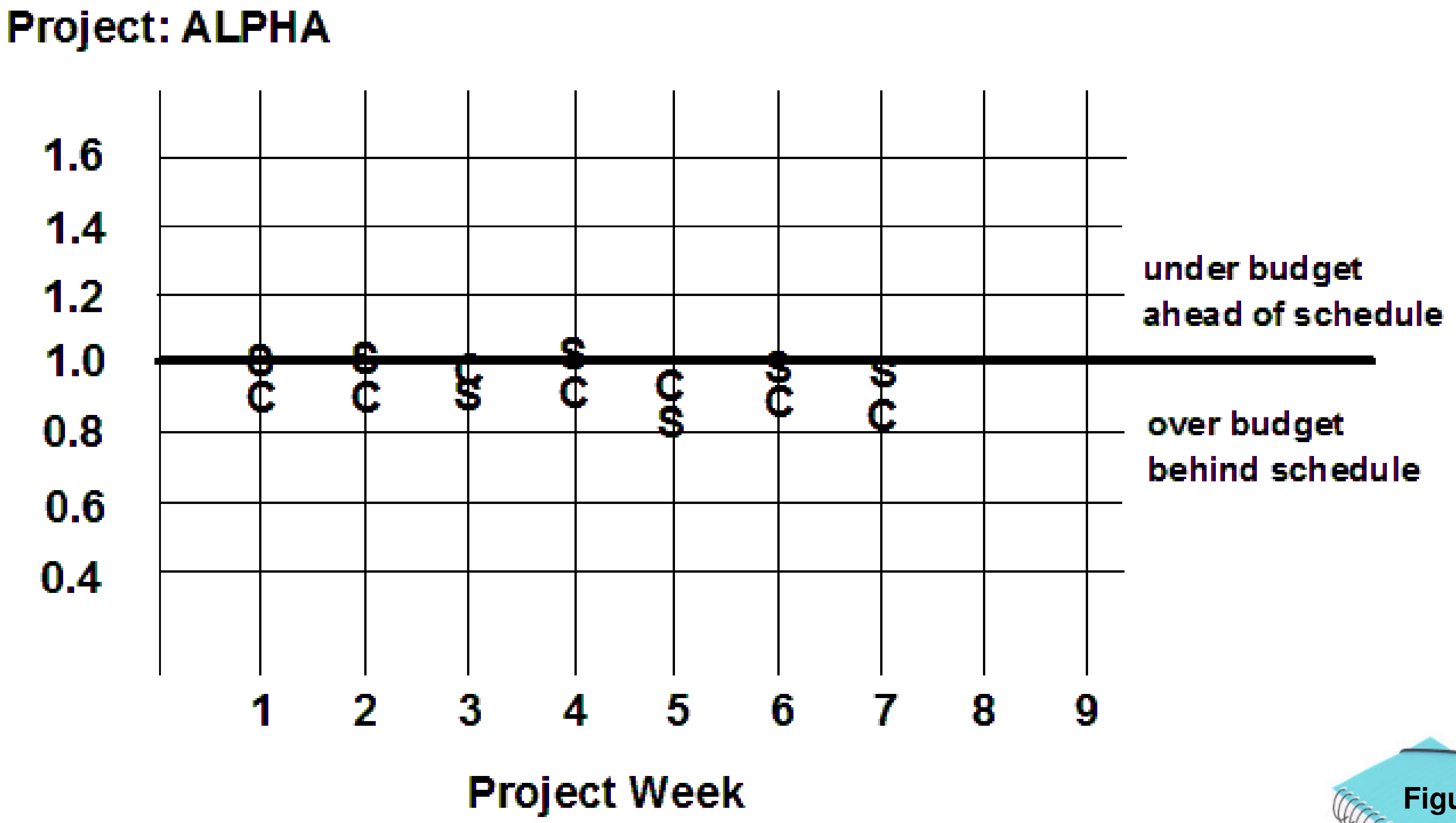


Figure 14-18

Ch14: Establishing & Managing a PPMP

Earned Value – SPI and CPI trending in a negative direction

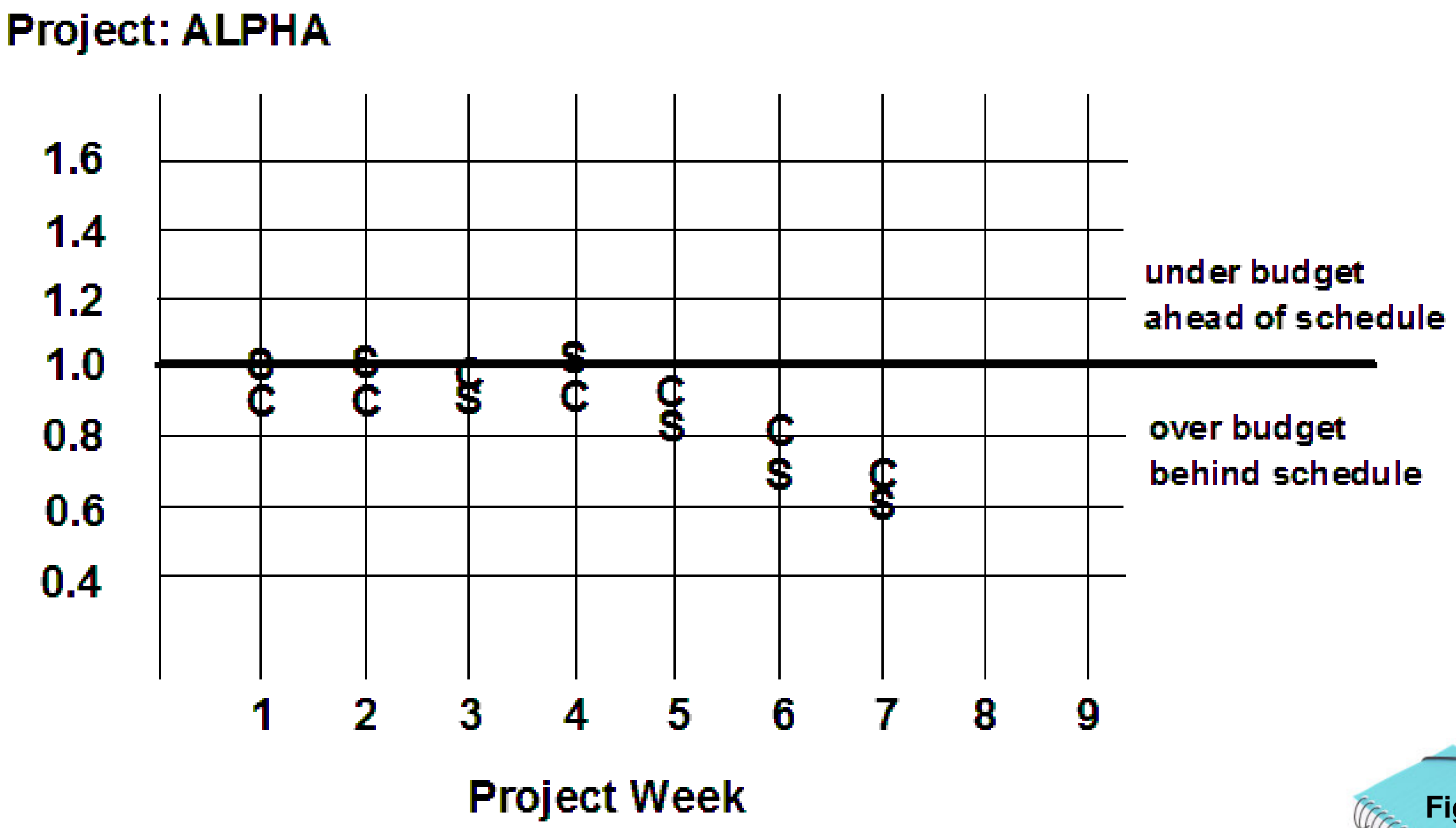


Figure 14-19

Earned Value – SPI and CPI trending in a positive direction

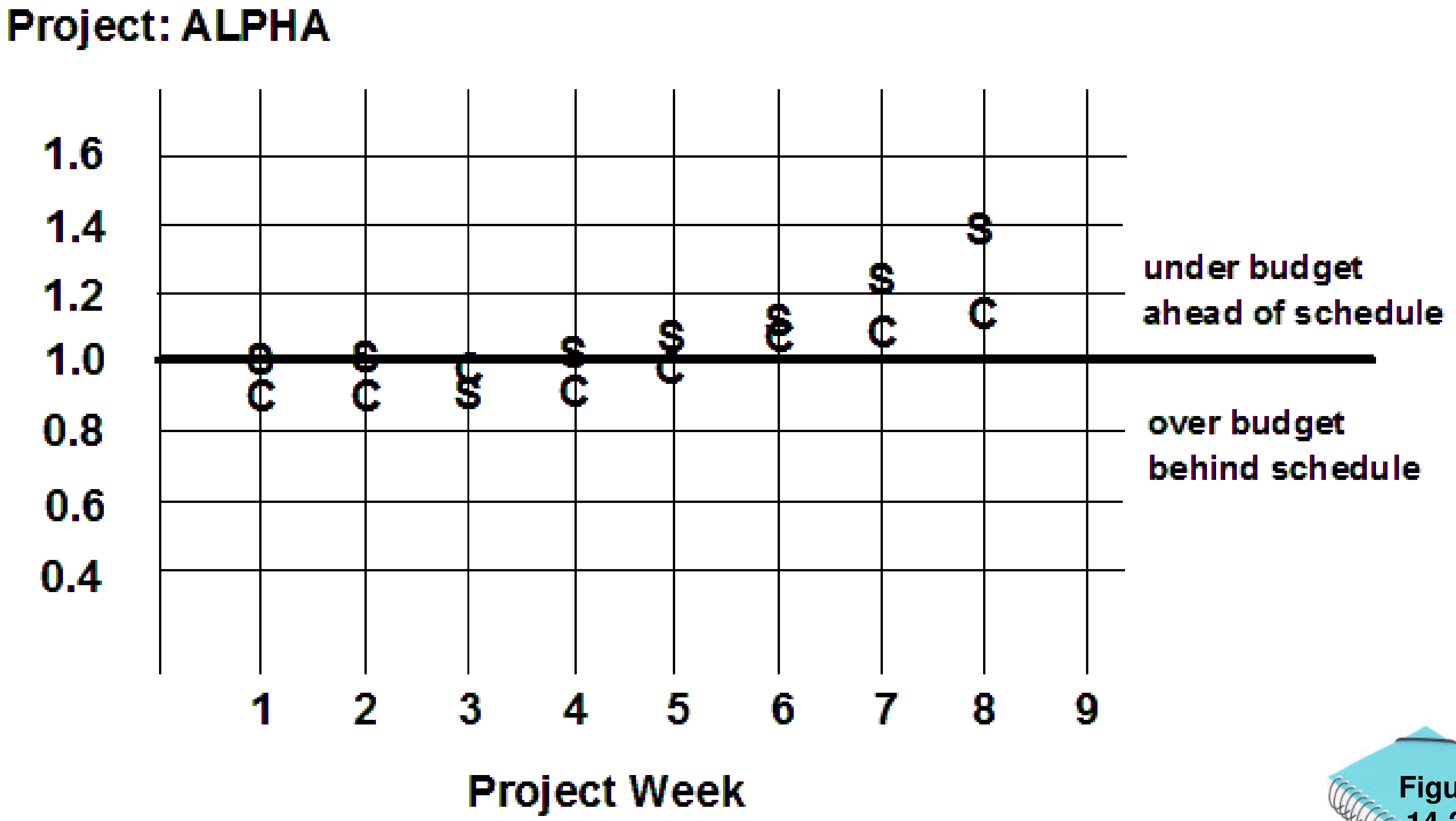


Figure 14-20

Earned Value – Performance Indices

Portfolio: BETA Program

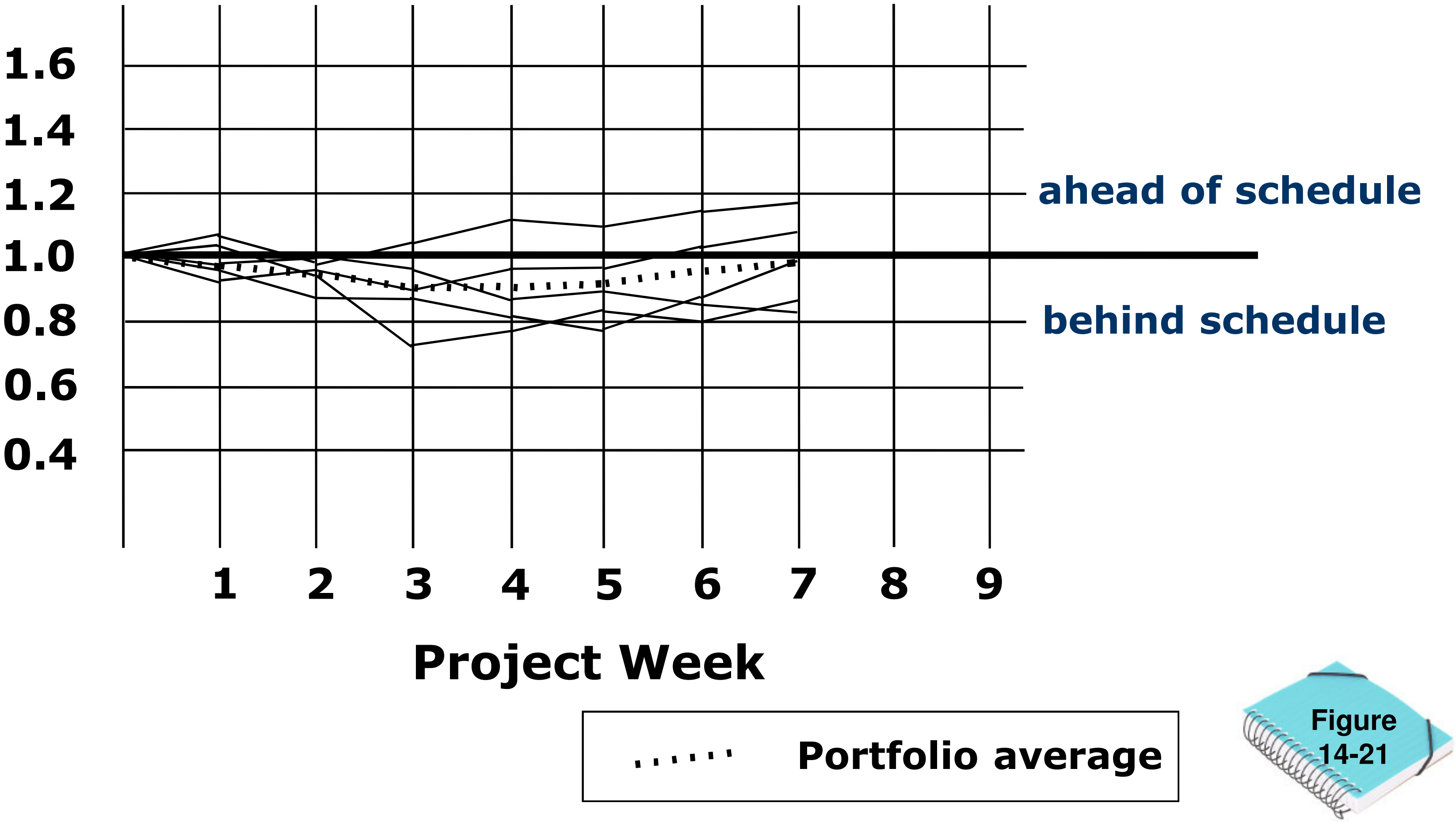
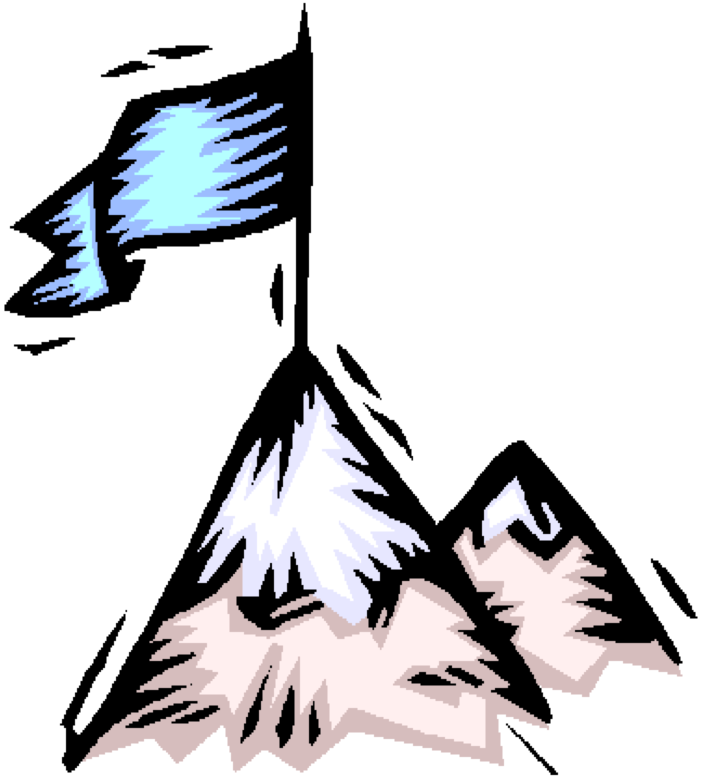


Figure 14-21

Closing Projects in the Portfolio

The project was proposed based on the value it would return to the enterprise if it were funded.

Was that value achieved?



Ch14: Establishing & Managing a PPMP

Lessons Learned

❶ Was the project goal/objectives achieved?

❷ Was the project work done on time?

❸ Was the client satisfied with the project results?

❹ Was organizational value realized? (Check success criteria)

❺ What lessons were learned about your project management methodology? What worked? What didn’t work?

❻ How well did the team follow the methodology?

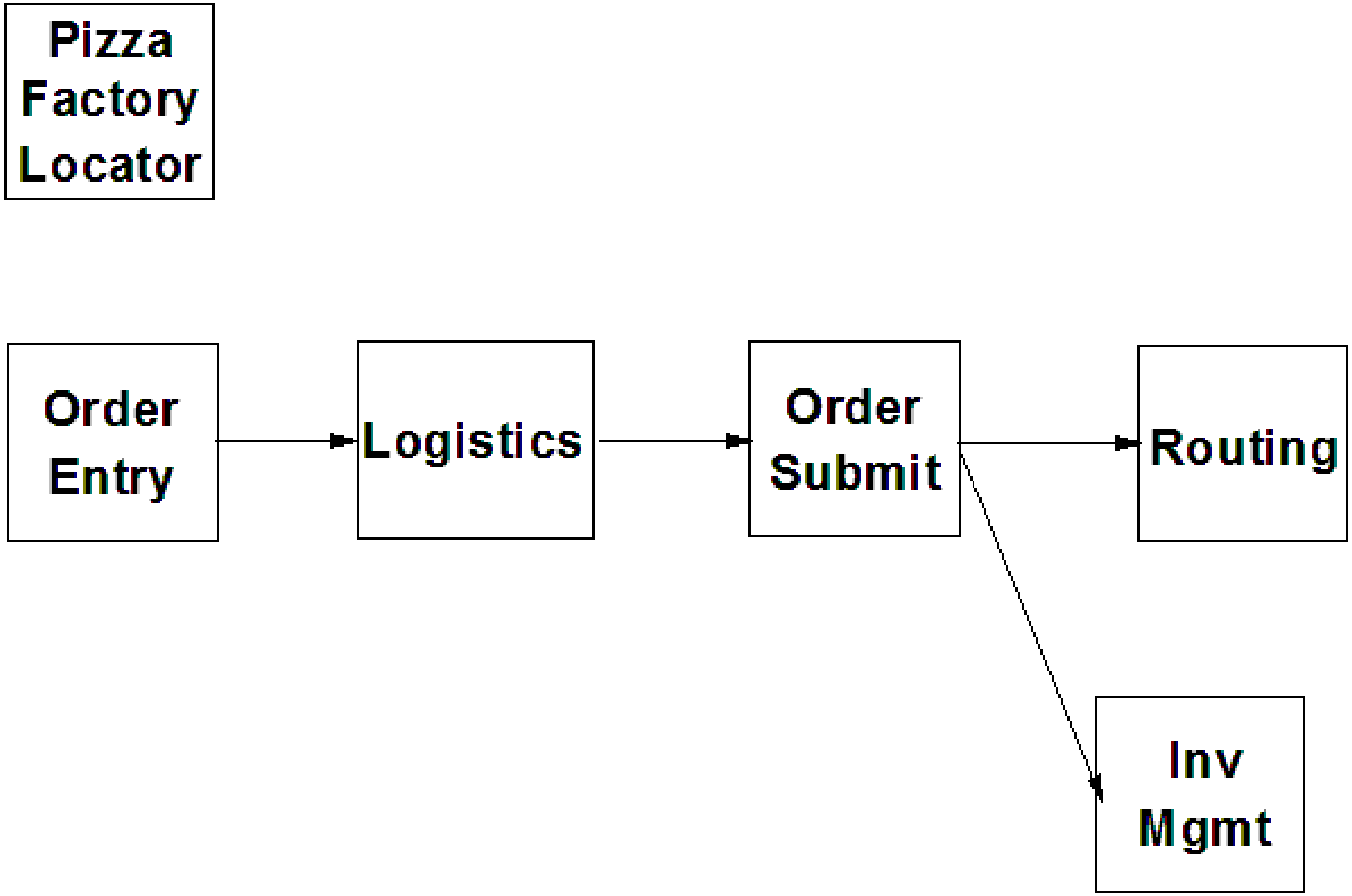
Roles & Responsibilities of the PSO …

- PSO supports the Project Sponsor
  - Proposal preparation
  - Shepherds the proposal through the process
- PSO supports the portfolio manager
  - Proposal intake and evaluation
  - Project prioritization
  - Selection support to the portfolio manager
  - Monitoring and reporting to the portfolio manager
  - Facilitate project review sessions

Preparing your Project for Submission

- A revised POS
- A two-step submission process
  - Submit the POS
  - Prepare & submit detailed project plan
- A New Submission Process
  - Project name
  - Sponsor name
  - Project manager name
  - Project funding category
  - Project goal & objectives alignment
  - Explicit business value
  - Risks
  - Estimated total project cost
  - Estimated project duration

Systems- level solution for PDQ



Pizza Factory Locator

Order Entry

Logistics

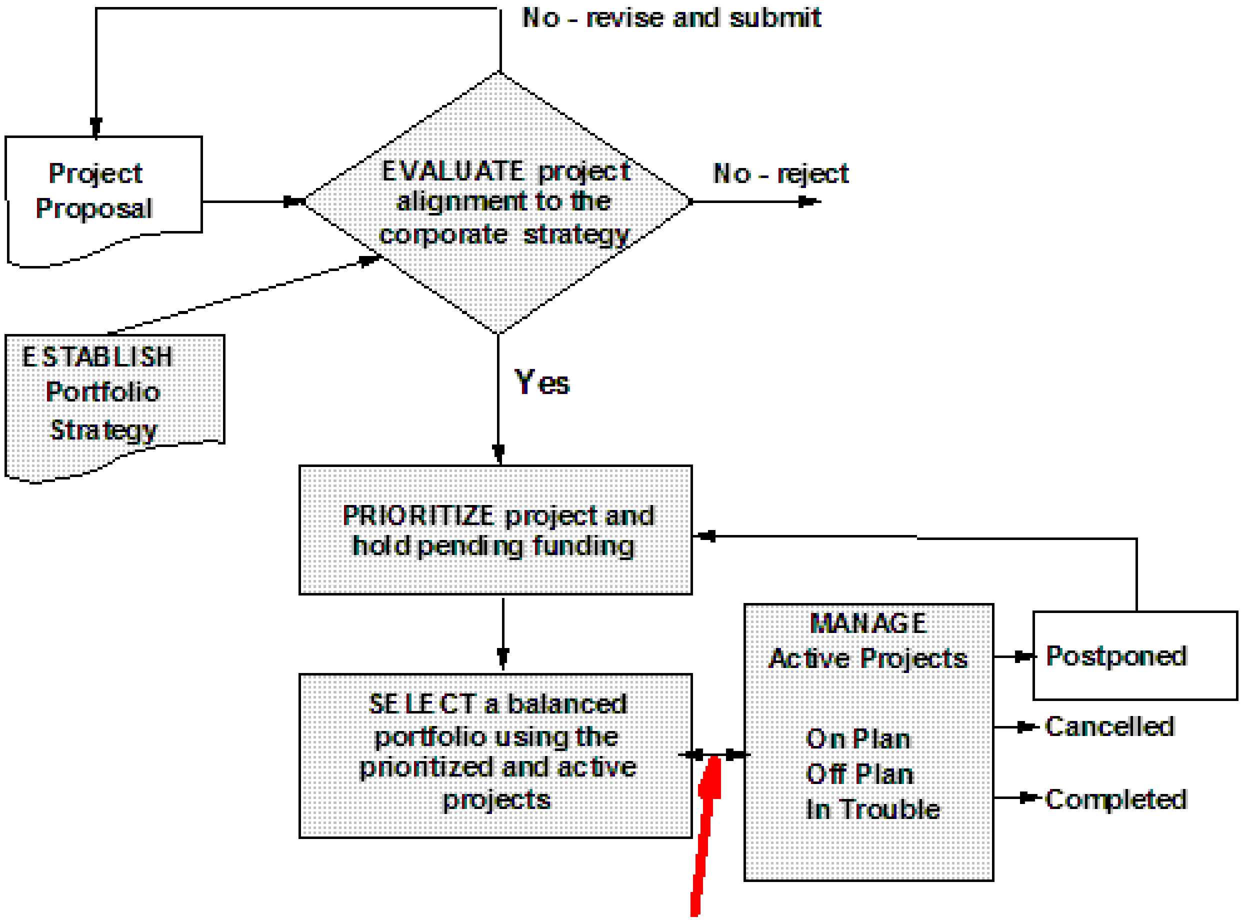
Order Submit

Routing

Inv Mgmt

Figure 14-22

Agile Project Portfolio Life Cycle



No - revise and submit

Project Proposal

EVALUATE project alignment to the corporate strategy

No - reject

ESTABLISH Portfolio Strategy

Yes

PRIORITIZE project and hold pending funding

SELECT a balanced portfolio using the prioritized and active projects

MANAGE Active Projects

On Plan
Off Plan
In Trouble

Postponed

Cancelled

Completed

NOTE: A right-facing arrow is the standard PPM life cycle
A two way facing arrow is the agile PPM life cycle

Figure 14-23

A PMLC Model for the APPM Process

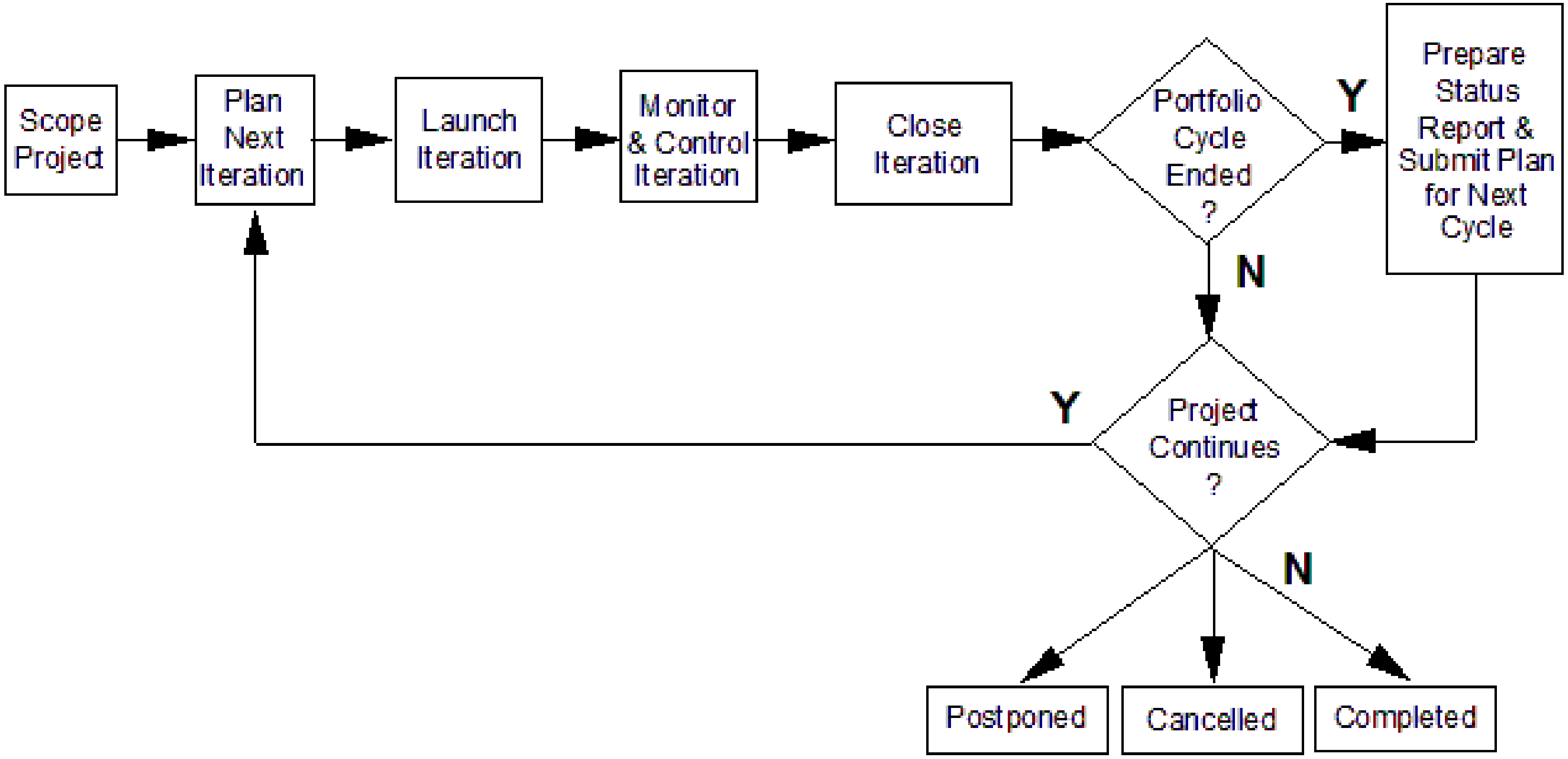


Figure 14-24

Portfolio Staffing Model

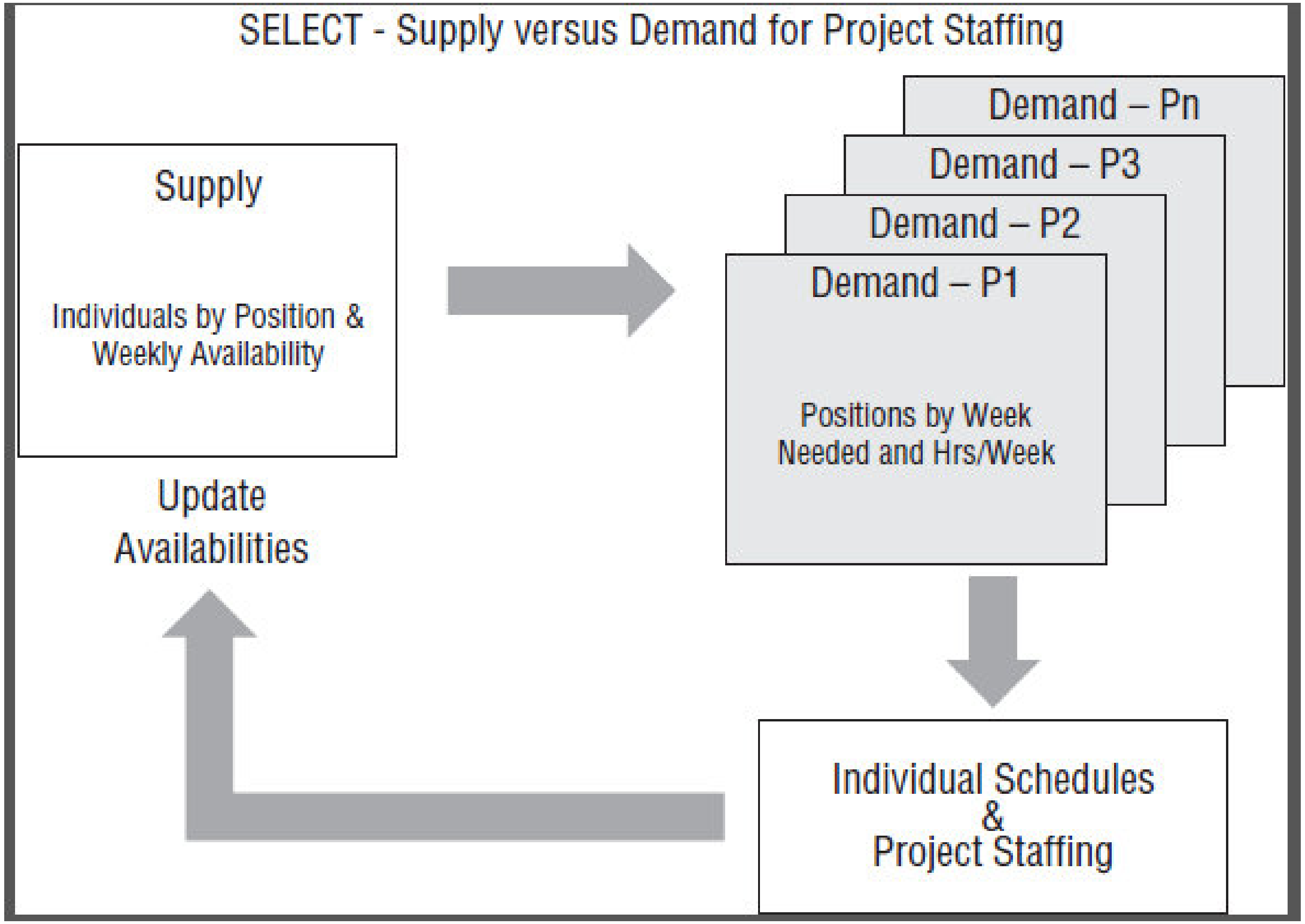

SELECT - Supply versus Demand for Project Staffing
Supply
Individuals by Position & Weekly Availability
Demand – Pn
Demand – P3
Demand – P2
Demand – P1
Positions by Week Needed and Hrs/Week
Individual Schedules & Project Staffing
Update Availabilities

Figure 14-25

Ch14: Establishing & Managing a PPMP

Challenges of Managing Agile Portfolios

- Handling high change and high speed
- Managing complexity and uncertainty
- Nurturing creativity

SELECT a balanced portfolio

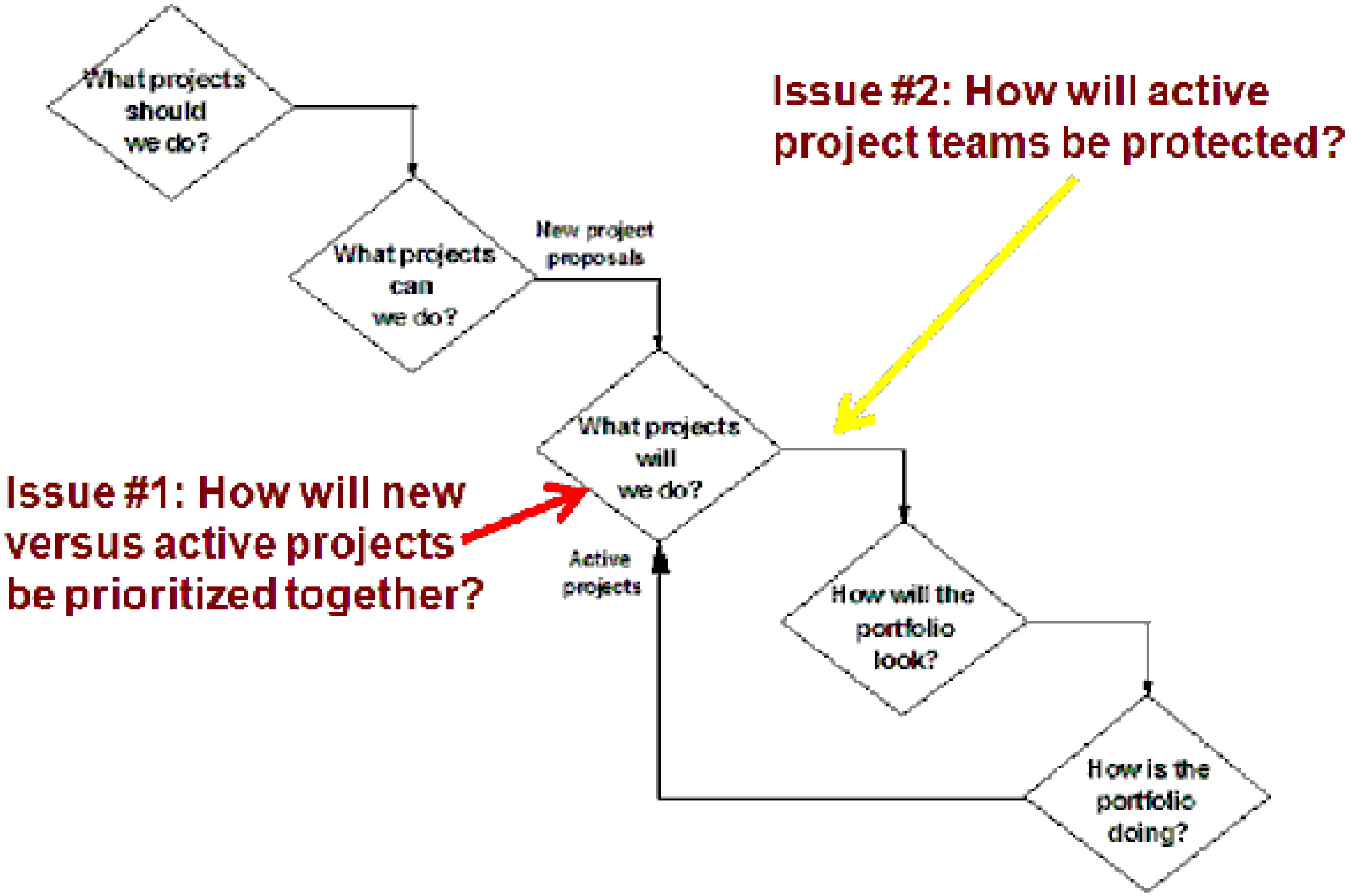
- What should we do?
- What can we do?
- What will we do?
- How will we do it?

Ch14: Establishing & Managing a PPMP

MANAGE active projects

- Performance measures
  - Earned value
  - Milestone trend charts
- Available human resources
- Closing projects in the agile portfolio

Portfolio Staffing Model


What projects should we do?
What projects can we do?
New project proposals
What projects will we do?
Active projects
How will the portfolio look?
How is the portfolio doing?

Issue #2: How will active project teams be protected?

Issue #1: How will new versus active projects be prioritized together?

Figure 14-26

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch15: Establishing & Managing a Continuous Process Improvement Program

Presented by
(facilitator name)

Ch15: Establishing & Managing a CPIP

Summary of Chapter 15

- Understanding project management processes and practices
- Defining process and practice maturity
- Measuring project management process and practice maturity
- Using the continuous process improvement model
- Defining roles and responsibilities of the PSO
- Realizing the benefits of implementing a CPIM
- Applying CPIM to business processes
- Using process improvement tools, templa processes

Continuous Process Improvement – The Problem

- You have invested considerable time in project management process development.
- You have invested considerable money in project management practice training.
- But your projects are still late, over-budget and not what the client needed.
- And you can't identify any return on your investment.
- You need to take action, but what action makes sense given what has been done so far?

Ch15: Establishing & Managing a CPIP

The Solution

Develop and implement a strategy for the continuous improvement of your project management processes and practices.

That strategy will be called a Continuous Process Improvement Model (CPIM).

Ch15: Establishing & Managing a CPIP

What should the CPIM give you?

- An improved quality ROI for PM processes
- Greater alignment between PM processes and their practice
- A way to leverage best practice
- A reduced risk of project failure
- Significant cost avoidance due to increased project success

The Process and its Practice

- **The Process**
  - How was it developed?
  - How complete is it?
  - How is it documented?
  - How is it supported?
  - How is it updated?
- **The Practice**
  - Are all project managers required to use the process?
  - Can project managers substitute other tools, templates, and processes as they deem appropriate?
  - How are project managers monitored for compliance?
  - How are corrective action steps taken to correct for non-compliance?
  - How are project managers practices monitored for best practices?

Ch15: Establishing & Managing a CPIP

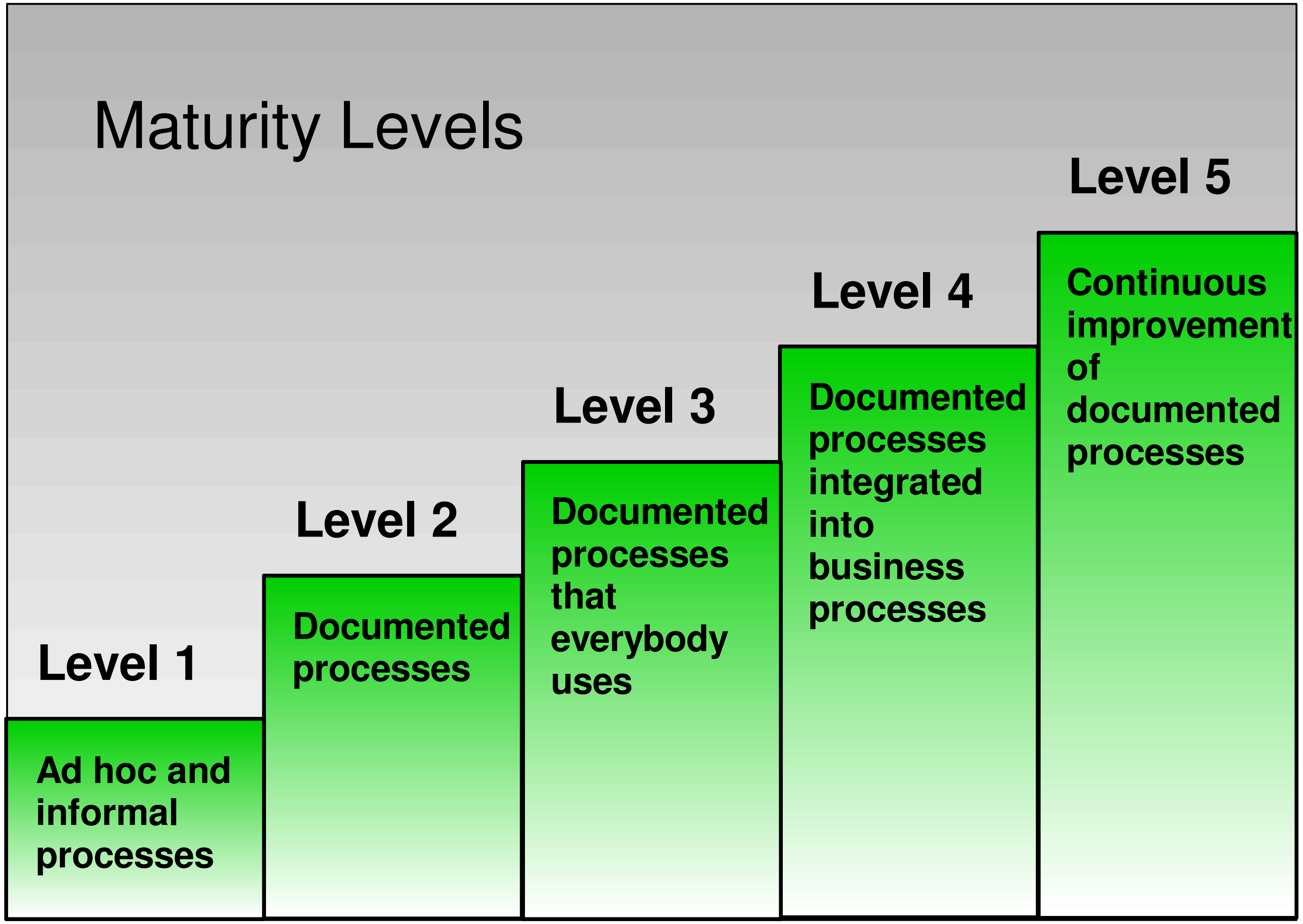
Understanding PM processes & practices

- The project management process
  - How was it developed?
  - How complete is it?
  - How is it documented?
  - How is it supported?
  - How is it updated

Understanding PM processes & practices

- The practice of the project management process
  - Are all PMs required to use the process?
  - Can PMs substitute other tools, templates, and processes?
  - Is there a way to incorporate best practices into the practice of the project management process?
  - How are PMs monitored for compliance?
  - How are corrective action steps taken to correct for noncompliance?
  - How are PMs practices monitored for best practices?

Defining Process and Practice Maturity



Maturity Levels

Level 1

Ad hoc and informal processes

Level 2

Documented processes

Level 3

Documented processes that everybody uses

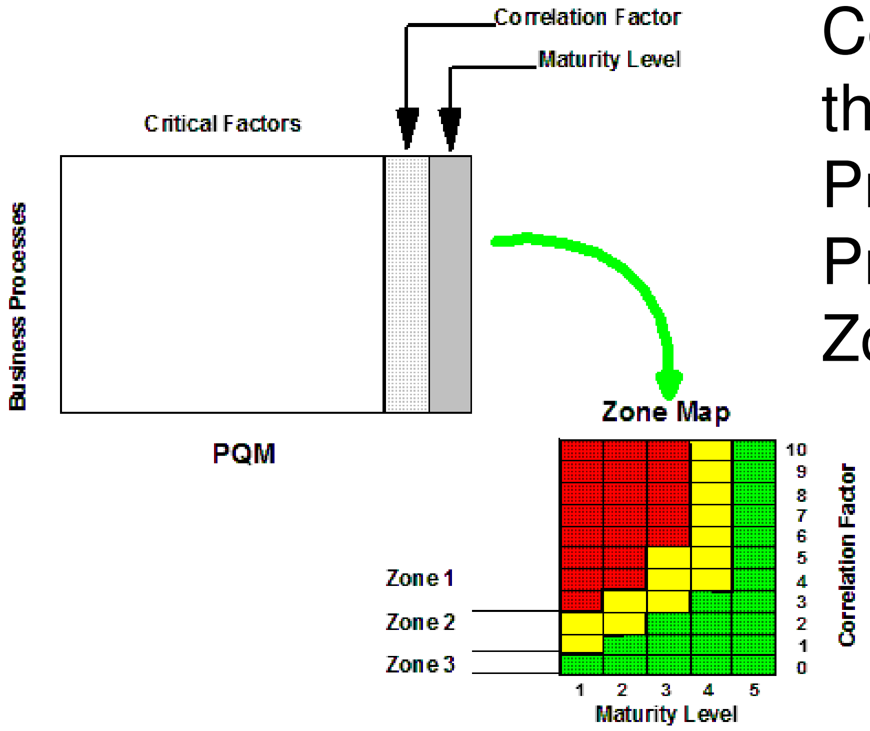
Level 4

Documented processes integrated into business processes

Level 5

Continuous improvement of documented processes

The Solution – Tools for Continuous Improvement



Process Quality Matrix   Zone Map

The key inputs to the Continuous Improvement of the Process and Practice of Project Management are the Process Quality Matrix & Zone Map

Figure 15-01

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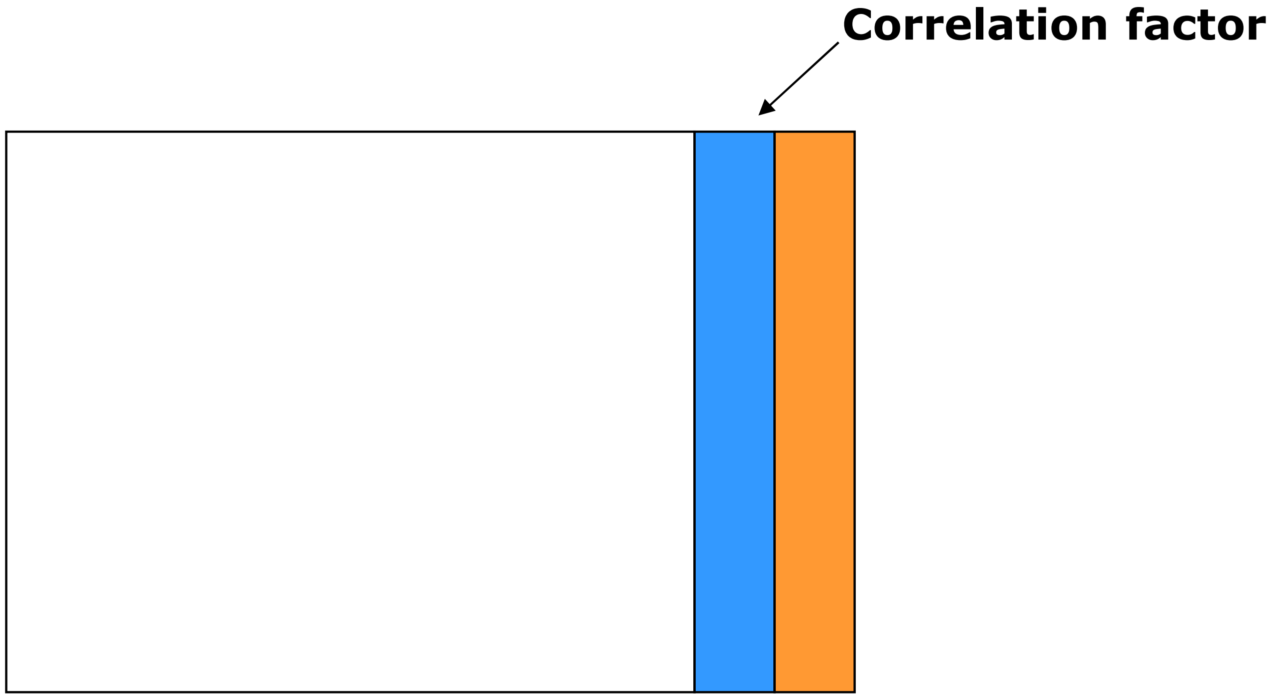
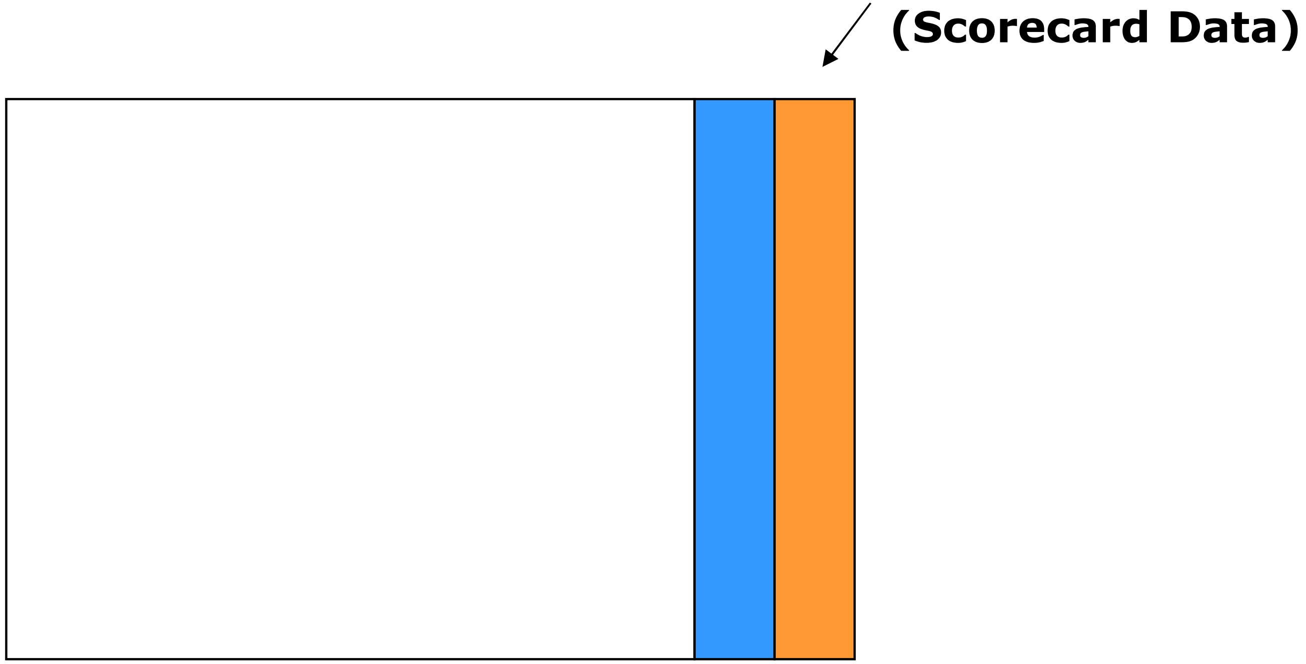
Overview of the Process Quality Matrix



The relationship between the project management processes and the critical success factors

Overview of the Process Quality Matrix



A metric to measure how well a particular process is documented or practiced.

Ch15: Establishing & Managing a CPIP

A completed PQM

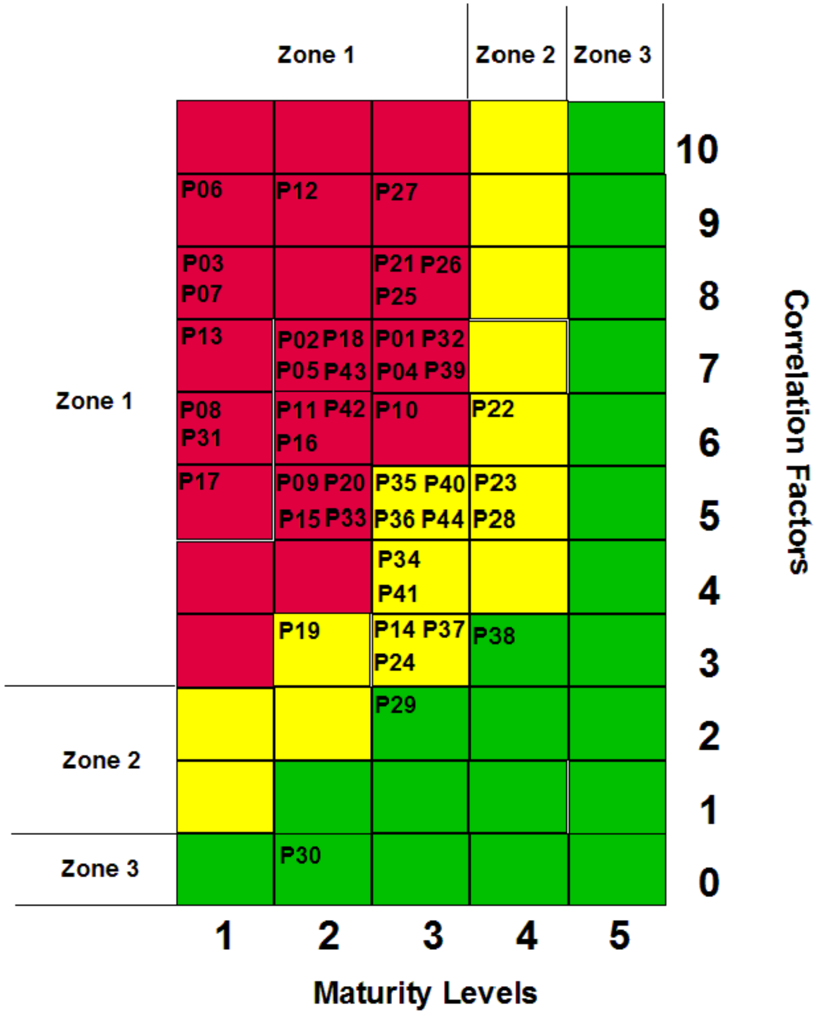
			1	2	3	4	5	6	7	8	9	10	#	GR
Integration Management	P01	Develop Project Charter	■	■		■			■	■	■	■	7	3.21
	P02	Develop Preliminary Project Scope Statement	■	■		■			■	■	■	■	7	2.11
	P03	Develop Project Management Plan	■	■		■		■	■	■	■	■	8	1.33
	P04	Direct and Manage Project Execution	■			■	■	■	■	■	■		7	3.30
	P05	Monitor and Control Project Work	■			■	■	■	■	■		■	7	2.89
	P06	Integrated Change Control	■	■	■	■	■	■	■	■	■		9	1.44
	P07	Close Project	■	■	■	■		■		■	■	■	8	1.88
Scope Management	P08	Scope Planning	■	■		■		■	■	■			6	1.88
	P09	Scope Definition	■			■		■	■	■			5	2.22
	P10	Create WBS	■		■	■				■	■	■	6	3.33
	P11	Scope Verification	■	■	■	■		■		■			6	2.11
	P12	Scope Control	■	■	■	■	■	■	■	■	■		9	2.21
Time Management	P13	Activity Definition	■	■	■			■	■	■	■	■	7	1.11
	P14	Activity Sequencing		■				■		■			3	3.01
	P15	Activity Resource Estimating		■	■	■	■	■					5	2.21
	P16	Activity Duration Estimating					■	■	■	■	■	■	6	2.45
	P17	Schedule Development	■		■			■	■		■		5	1.88
	P18	Schedule Control			■		■	■	■	■	■	■	7	2.81
Cost Management	P19	Cost Estimating			■			■		■			3	2.75
	P20	Cost Budgeting	■			■		■		■	■		5	2.21
	P21	Cost Control	■	■	■			■	■	■	■	■	8	3.50
Quality Management	P22	Quality Planning	■	■	■				■	■	■		6	4.21
	P23	Perform Quality Assurance	■		■	■		■			■		5	3.51
	P24	Perform Quality Control						■			■	■	3	3.91
HR Management	P25	Human Resource Planning		■	■		■	■	■	■	■	■	8	3.75
	P26	Acquire Project Team		■	■	■	■	■		■	■	■	8	3.80
	P27	Develop Project Team		■	■	■	■	■	■	■	■	■	9	3.55
	P28	Manage Project Team	■			■	■	■		■			5	3.00
Comm. Management	P29	Communications Planning	■			■							2	3.51
	P30	Information Distribution						■					1	2.90
	P31	Performance Reporting	■	■	■	■		■		■			6	1.75
	P32	Manage Stakeholders	■		■	■	■	■	■	■			7	3.00
Risk Management	P33	Risk Management Planning			■			■		■	■	■	5	2.21
	P34	Risk Identification			■		■			■		■	4	3.75
	P35	Qualitative Risk Analysis			■			■		■	■	■	5	3.51
	P36	Quantitative Risk Analysis			■			■		■	■	■	5	3.21
	P37	Risk Response Planning			■				■	■			3	3.91
	P38	Risk Monitoring & Control			■			■		■			3	4.01
Procurement Management	P39	Procurement Planning		■	■	■	■			■	■	■	7	3.51
	P40	Solicitation Planning				■		■		■	■	■	5	3.21
	P41	Solicitation				■		■			■	■	4	3.00
	P42	Source Selection				■	■		■	■	■	■	6	2.81
	P43	Contract Administration				■	■	■	■	■	■	■	7	2.75
	P44	Contract Close-out				■	■	■			■	■	5	3.55

CRITICAL FACTORS

CF1 Lack of user input
CF2 Incomplete rqmts spec
CF3 Changing rqmnts spec
CF4 Lack of exec support
CF5 Tech incompetence
CF6 Lack of resources
CF7 Unrealistic expectations
CF8 Unclear objectives
CF9 Unrealistic time frames
CF10 New Technology

Figure 15-02

A Completed Zone Map

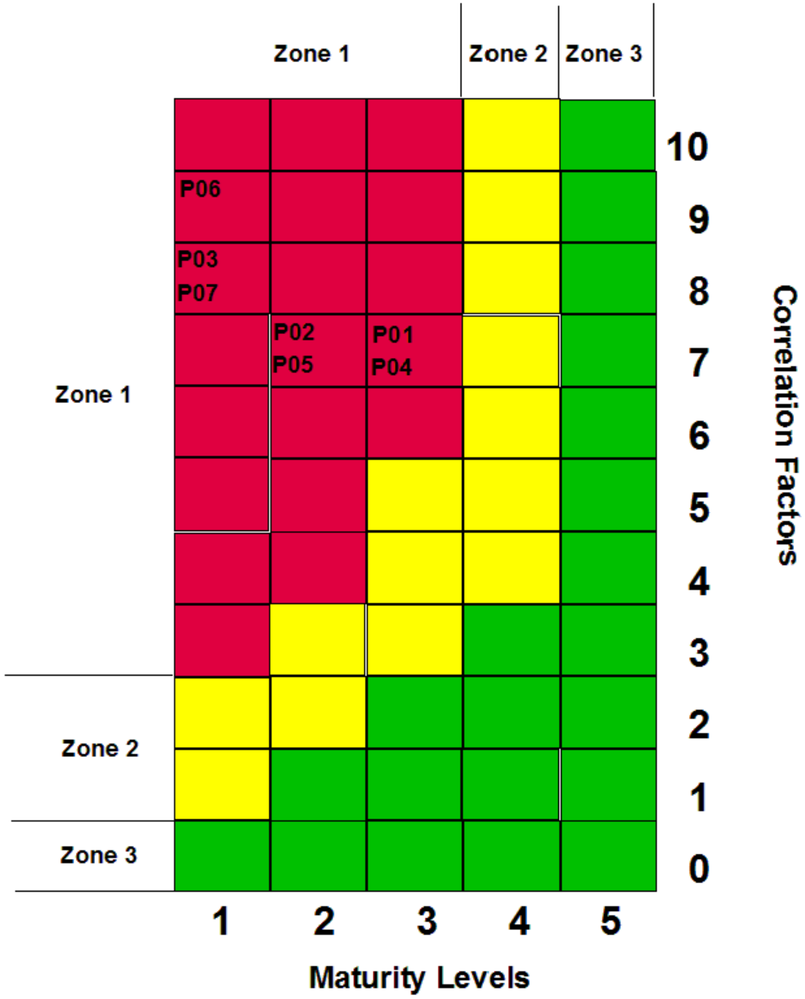


		Zone 1			Zone 2	Zone 3
Zone 1	10	🟥	🟥	🟥	🟨	🟩
	9	🟥 P06	🟥 P12	🟥 P27	🟨	🟩
	8	🟥 P03 P07	🟥	🟥 P21 P26 P25	🟨	🟩
	7	🟥 P13	🟥 P02 P18 P05 P43	🟥 P01 P32 P04 P39	🟨	🟩
	6	🟥 P08 P31	🟥 P11 P42 P16	🟥 P10	🟨 P22	🟩
	5	🟥 P17	🟥 P09 P20 P15 P33	🟨 P35 P40 P36 P44	🟨 P23 P28	🟩
	4	🟥	🟥	🟨 P34 P41	🟨	🟩
	3	🟥	🟨 P19	🟨 P14 P37 P24	🟩 P38	🟩
Zone 2	2	🟨	🟨	🟩 P29	🟩	🟩
	1	🟨	🟩	🟩	🟩	🟩
Zone 3	0	🟩	🟩 P30	🟩	🟩	🟩
	Correlation Factors	1	2	3	4	5

Maturity Levels

Figure 15-03

Integration Management Zone Map



	Zone 1	Zone 1	Zone 1	Zone 2	Zone 3	Correlation Factors
Zone 1	🟥	🟥	🟥	🟨	🟩	10
	🟥 P06	🟥	🟥	🟨	🟩	9
	🟥 P03 P07	🟥	🟥	🟨	🟩	8
	🟥	🟥 P02 P05	🟥 P01 P04	🟨	🟩	7
	🟥	🟥	🟥	🟨	🟩	6
	🟥	🟥	🟨	🟨	🟩	5
	🟥	🟥	🟨	🟨	🟩	4
	🟥	🟨	🟨	🟩	🟩	3
Zone 2	🟨	🟨	🟩	🟩	🟩	2
	🟨	🟩	🟩	🟩	🟩	1
Zone 3	🟩	🟩	🟩	🟩	🟩	0
Maturity Levels	1	2	3	4	5	

Figure 15-04

Client Data – Box & Whisker Plot

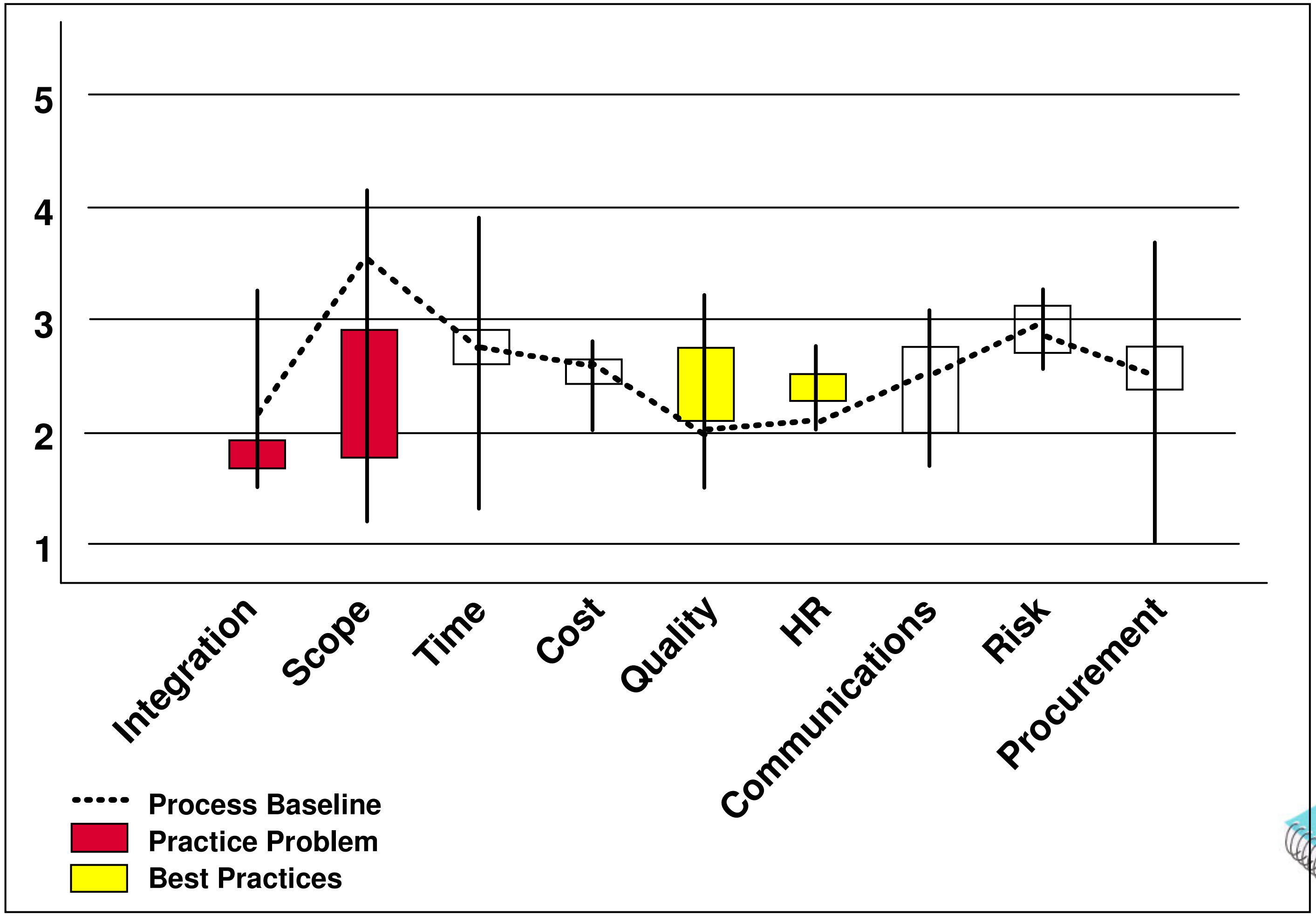


Figure 15-05

What Process has been defined so far?

Step 1: Define the Process

Step 2: Validate and Finalize PQM

Step 3: Establish Correlations

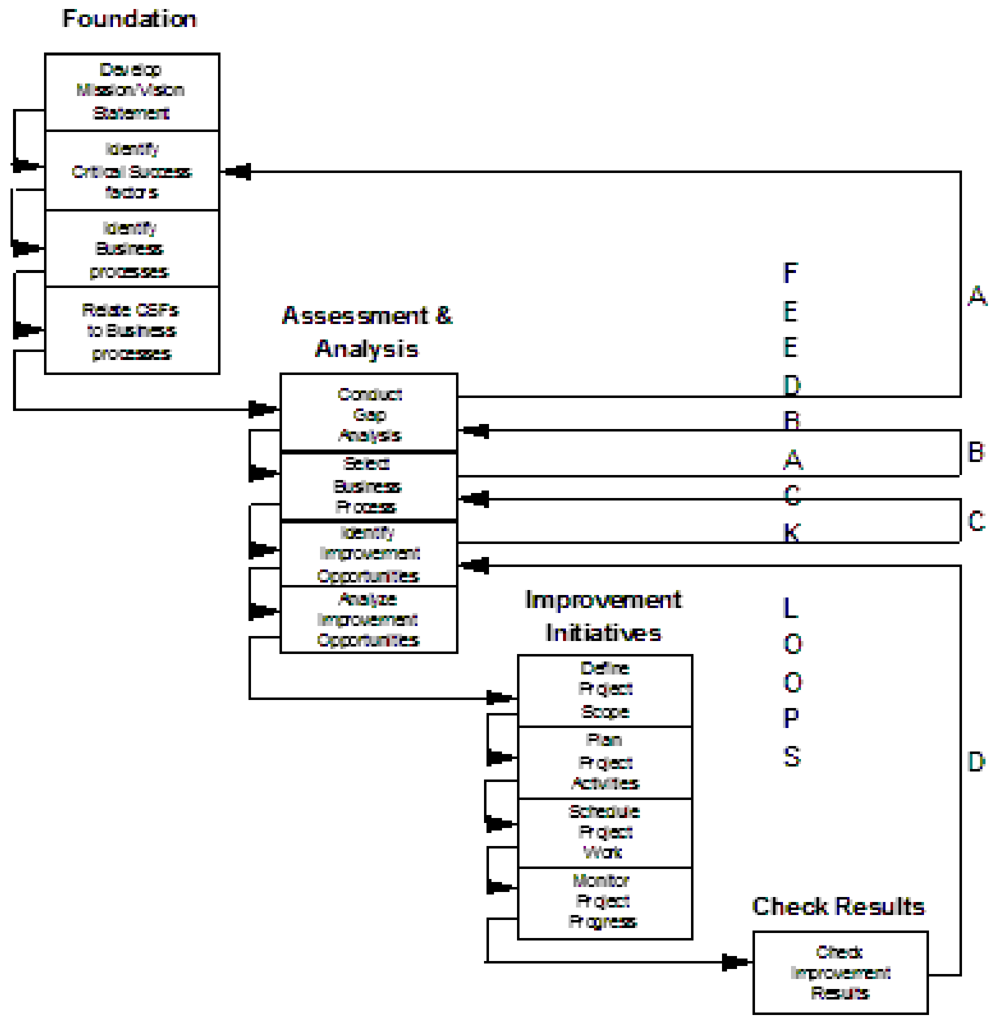
Step 4: Establish Metrics

Step 5: Assess Project Managers against the PMMA

Step 6: Assess Maturity Levels

Step 7: Plot results on the PQM Zone Map

Continuous Process Improvement Model



Foundation

- Develop Mission/Vision Statement
- Identify Critical Success factors
- Identify Business processes
- Relate CSFs to Business processes

Assessment & Analysis

- Conduct Gap Analysis
- Select Business Process
- Identify Improvement Opportunities
- Analyze Improvement Opportunities

Improvement Initiatives

- Define Project Scope
- Plan Project Activities
- Schedule Project Work
- Monitor Project Progress

Check Results

- Check Improvement Results

FEEDBACK LOOPS

Figure 15-06

Defining roles & responsibilities of the PSO

- Improve the ROI for the PM process
- Have an improvement process in place to significantly reduce the risk of project failure
- Be able to incorporate continuous process improvements
- Enable the PSO to provide leadership in the CPIM
- Have a documented approach that the PSO organization will need to achieve higher PM maturity levels
- Have a process for identifying and proactively acting on the weakest part of the organization’s PM capability

Applying CPIM to business processes

- **Flow** – The method of transforming input into output
- **Effectiveness** – How well customer expectations are met
- **Efficiency** – How well resources are used to produce an output
- **Cycle Time** – The time taken for transformation from input to final output
- **Cost** – The expenses of the entire process
- **Non-value-added time** – The time between process steps when no work is done on the product/service

Ch15: Establishing & Managing a CPIP

Characteristics of a Business Process

- **Lack of Effectiveness due to:**
  - Unacceptable product and/or service
  - Client complaints
  - High warranty costs
  - Decreased market share
  - Backlog
  - Redoing completed work
  - Rejected output
  - Late output
  - Incomplete output

Characteristics of a Business Process

- **Efficiency characteristics**
  - Cycle time per unit of transaction
  - Resources per unit of time
  - True-value added cost percentage of total process cost
  - Poor quality cost per unit of transaction (usually at a boundary point)

Ch15: Establishing & Managing a CPIP

Streamlining Tools

- Bureaucracy Elimination
- Duplication Elimination
- Value-added Assessment
- Simplification
- Process Cycle-Time Reduction
- Error Proofing
- Upgrading
- Simple Language
- Standardization
- Supplier Partnership
- Big Picture Improvement

Ch15: Establishing & Managing a CPIP

Indicators of Needed Improvement

- Excessive wait time between process steps
- Backlog at a process step
- Idle workstations in the business process
- Frequent rework
- Excessive non-value-added work
- Errors and mistakes
- Frequent exception situations

Indicators of Needed Improvement – Order Placement

- Sales reps take too long to enter orders
- There are too many entry and logging steps
- The same level of credit check is done for existing and new clients
- Credit checking is done before order picking

Ch15: Establishing & Managing a CPIP

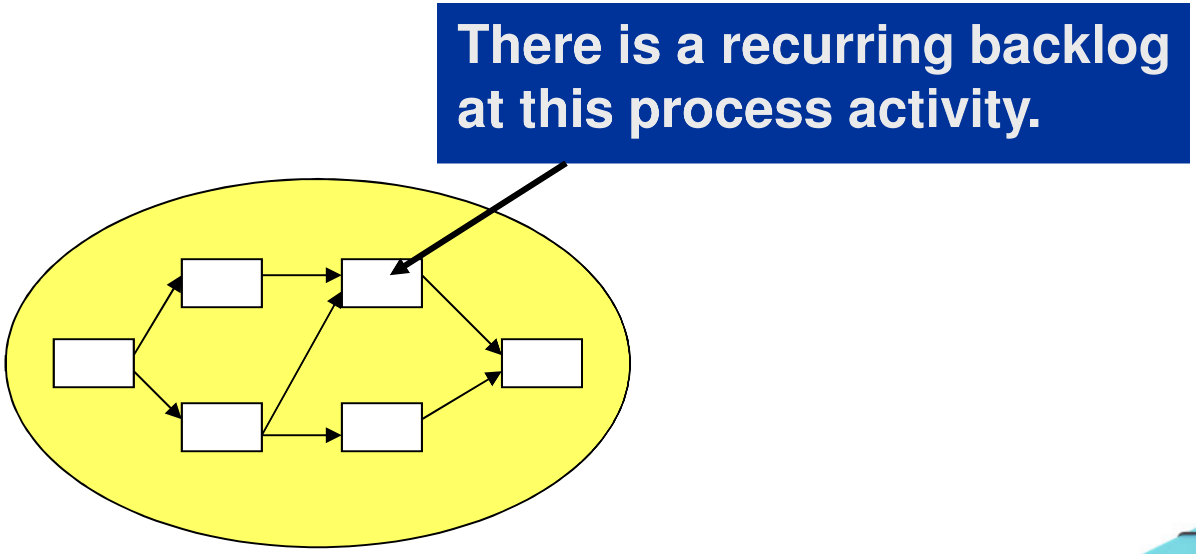
BPI Definition

- Documenting the “As Is” Business Process
- Envisioning the “To Be” State
- Defining the “As Is” to “To Be” Gap
    - Eliminate some tasks
    - Speed up some tasks
    - Introduce parallelism
    - Increase quality

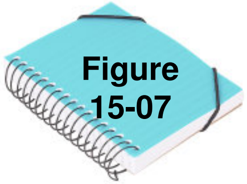
Ch15: Establishing & Managing a CPIP

What is a BPI Project?

- GOAL: To eliminate (or at least reduce) the effect resulting from one or more process activities that are preventing the process from performing at the desired level.


There is a recurring backlog at this process activity.

Business Process



Project Quality Management Tools

The Seven Basic Tools of Quality are:

- Fishbone Diagrams
- Control Charts
- Flowcharting
- Histograms
- Pareto Analysis
- Run Charts
- Scatter Diagrams

We will also add an 8th tool:

- Force Field Analysis

Basic Tool: Fishbone Diagram

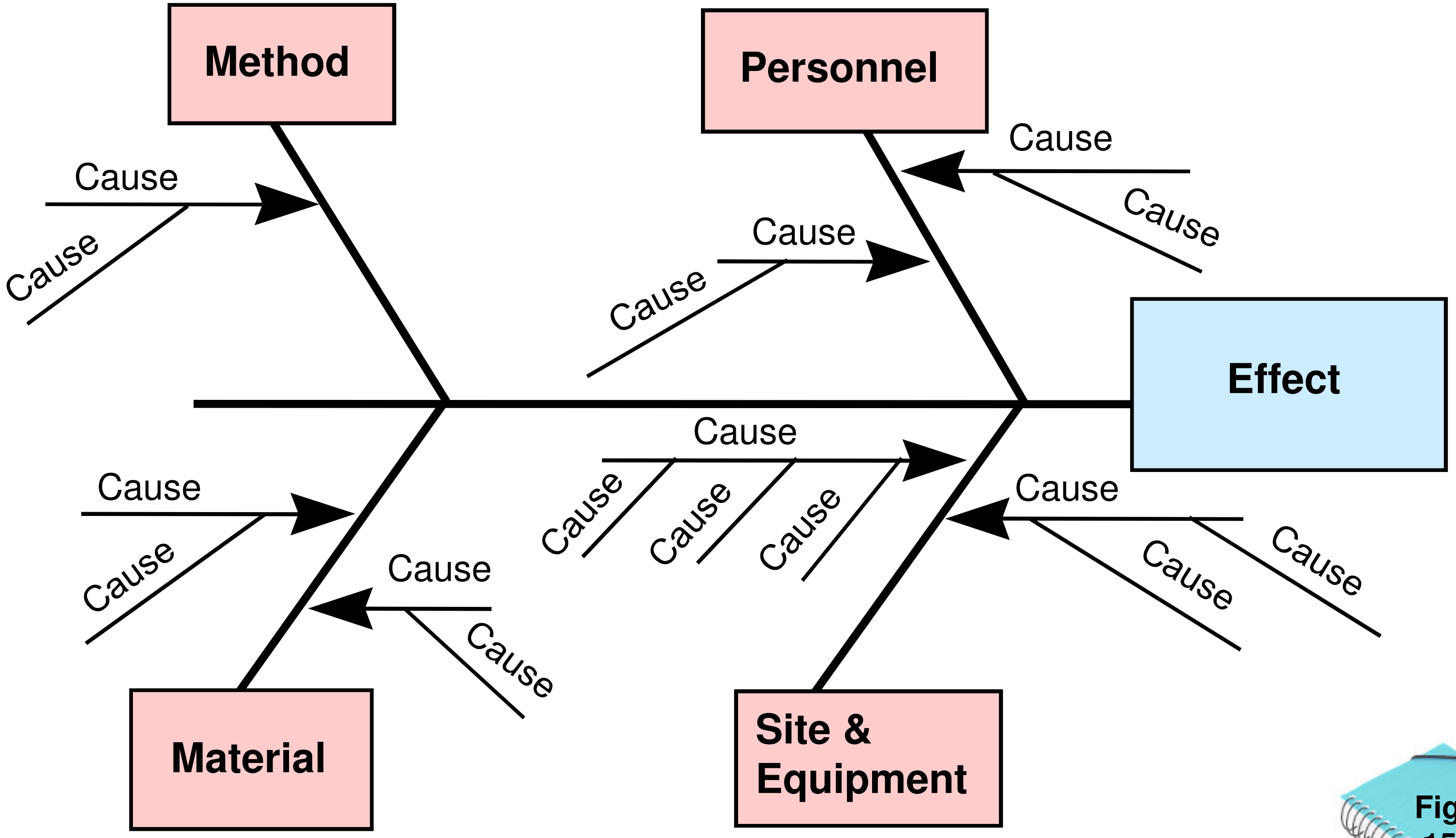
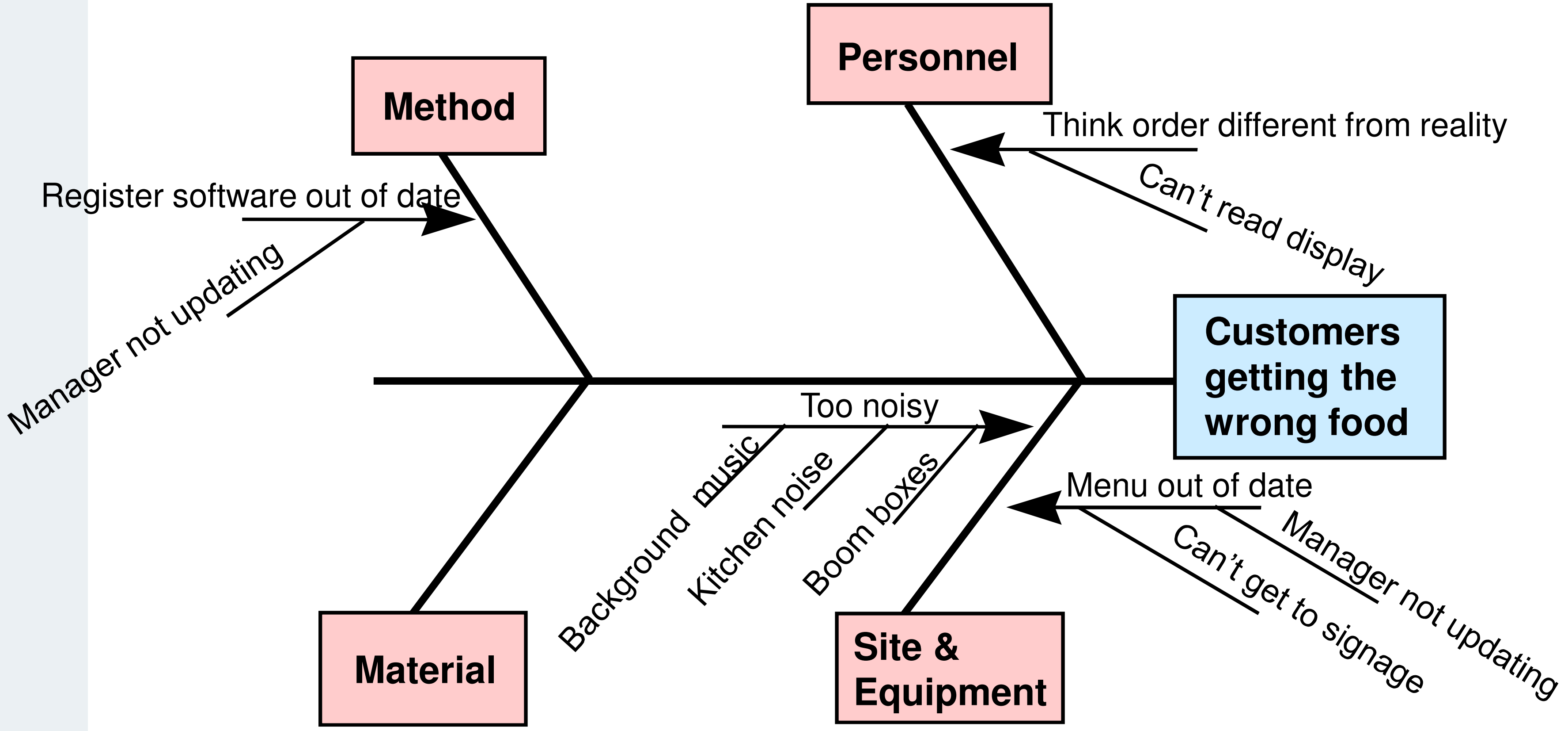
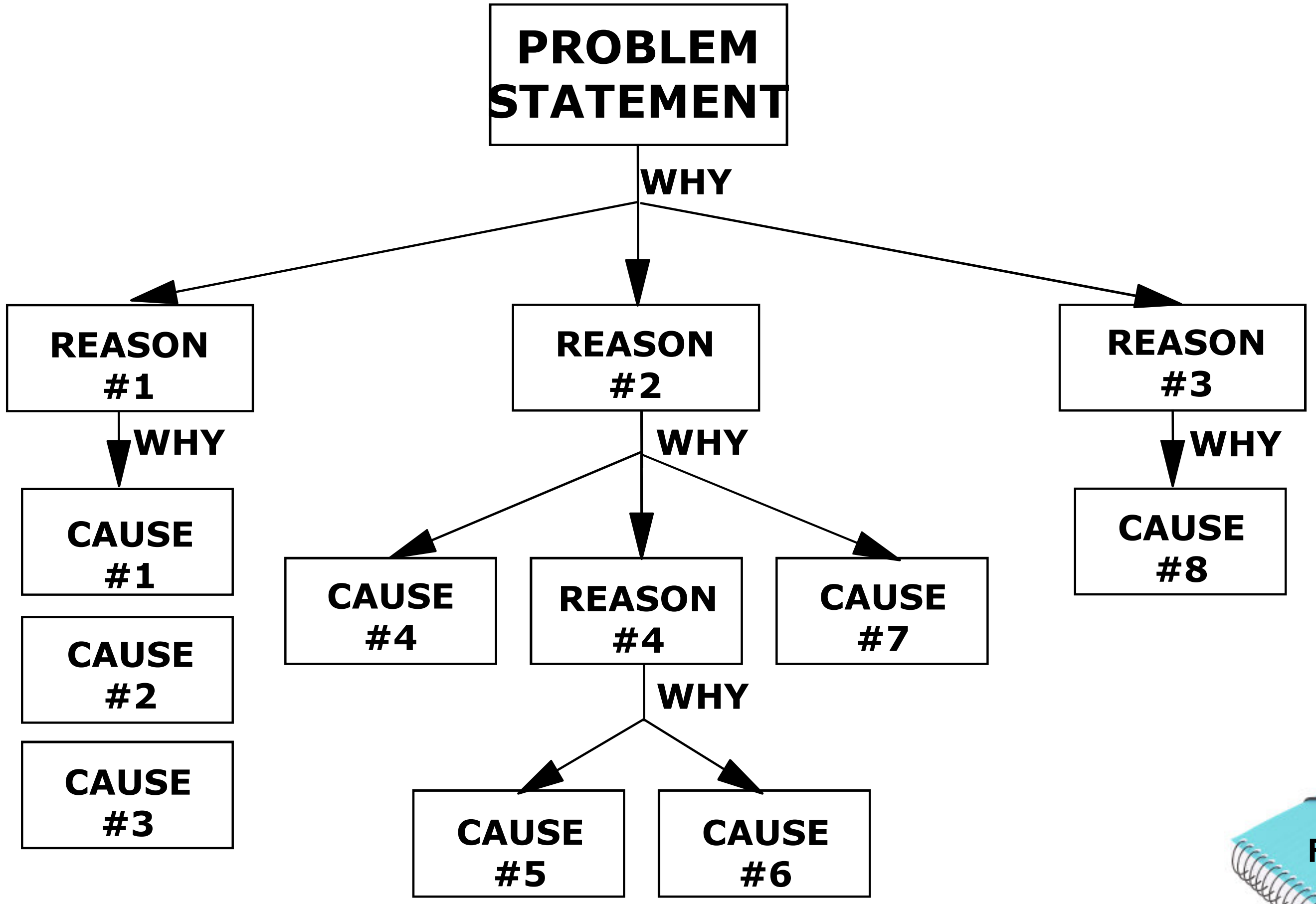


Figure 15-08

Basic Tool: Example – Fishbone Diagram



Basic Tool: Fishbone Diagram – Root Cause Template



PROBLEM STATEMENT

WHY

REASON #1

REASON #2

REASON #3

WHY

CAUSE #1

CAUSE #2

CAUSE #3

WHY

CAUSE #4

REASON #4

CAUSE #7

WHY

CAUSE #5

CAUSE #6

WHY

CAUSE #8

Figure 15-09

Basic Tool: Control Charts

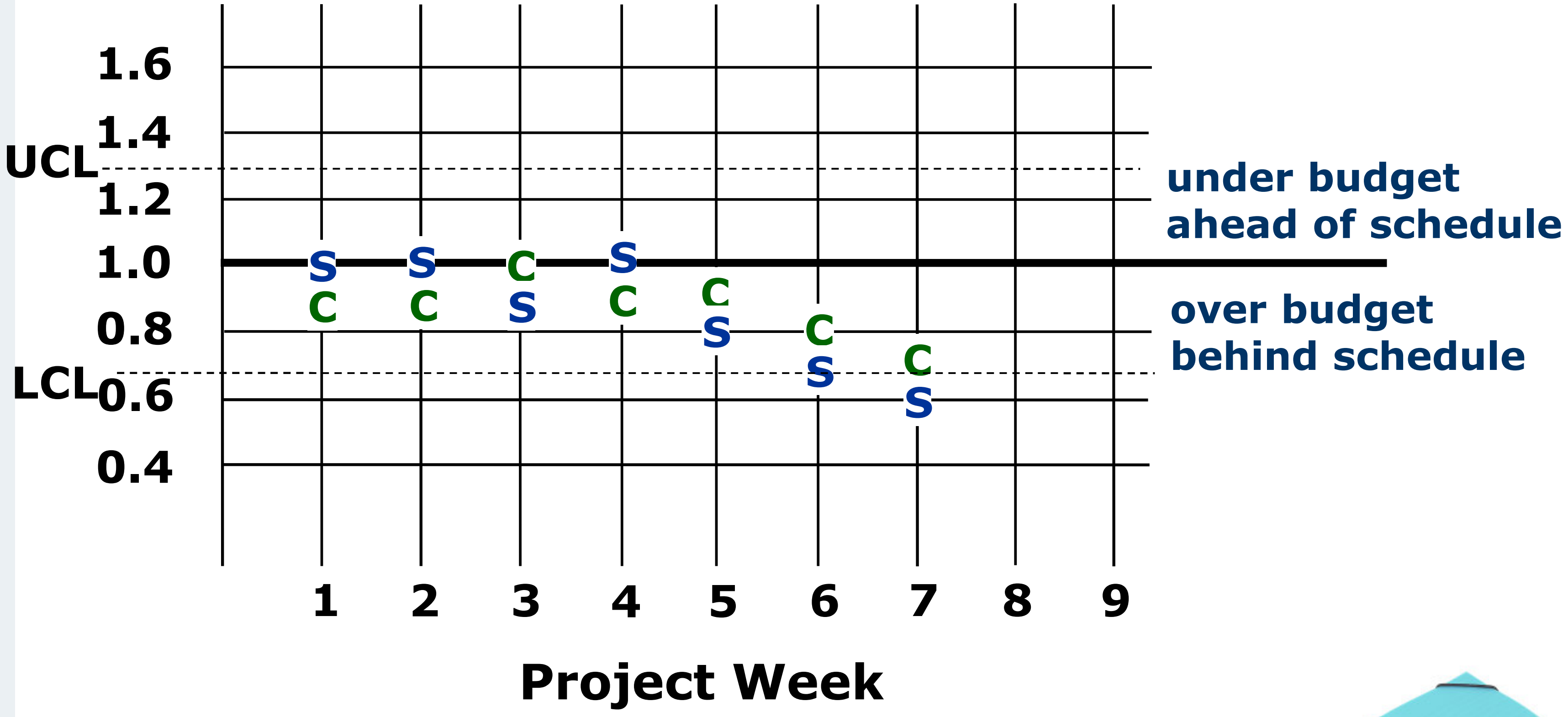


Figure 15-10

Basic Tool: Flowcharting

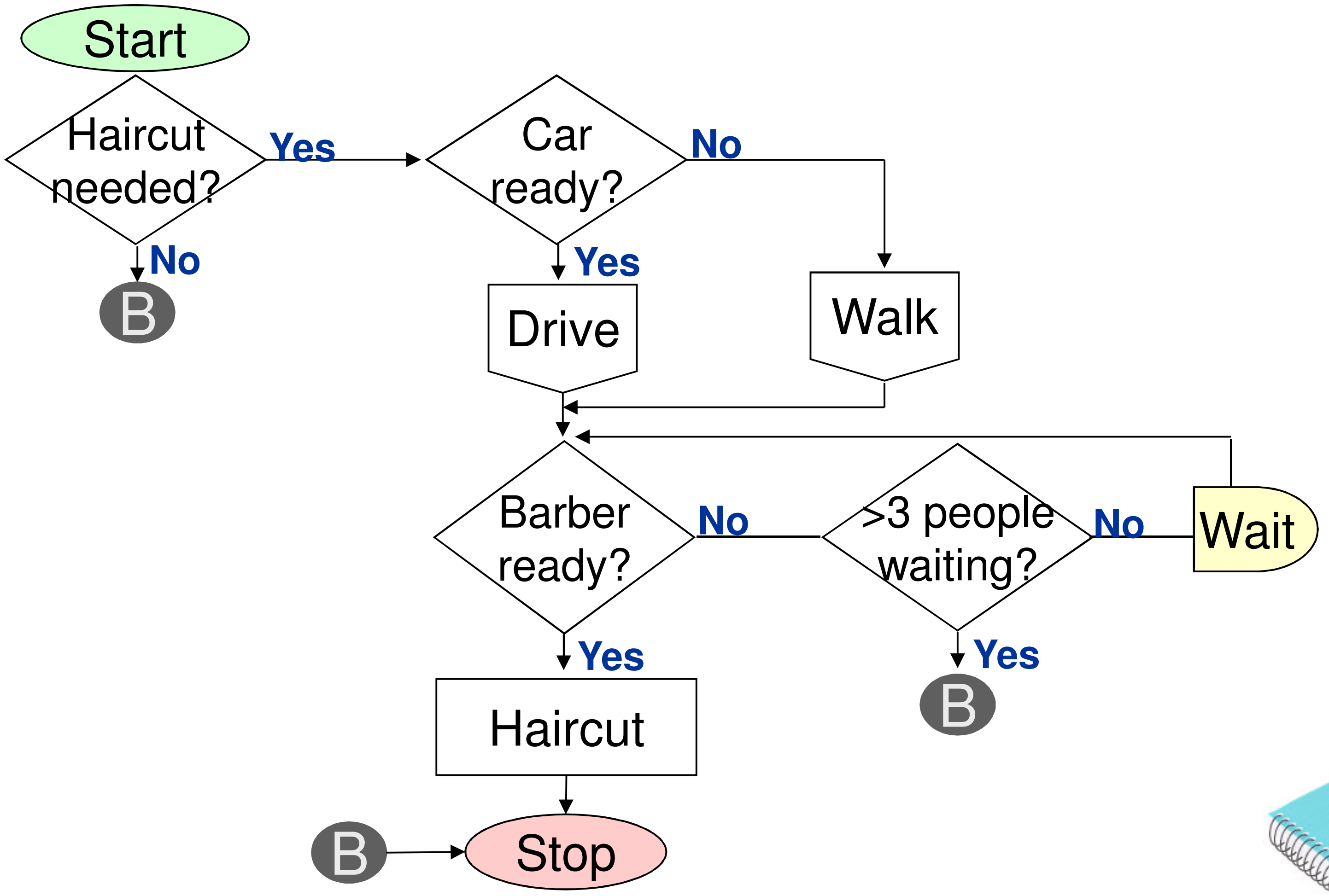


Figure 15-11

Basic Tool: Flowchart

Steps to Create a Flowchart:

- Decide on the process to flowchart
- Define the beginning and ending events of the process
- Describe the beginning event in an oval
- Keep asking “What happens next?” and writing each of the subsequent steps in rectangles below the oval
- When a decision step is reached, write a yes/no question in a diamond and develop each path (make sure that each decision path re-enters the process or is pursued to its logical conclusion)
- Describe the ending event in an oval

Basic Tool: Histograms

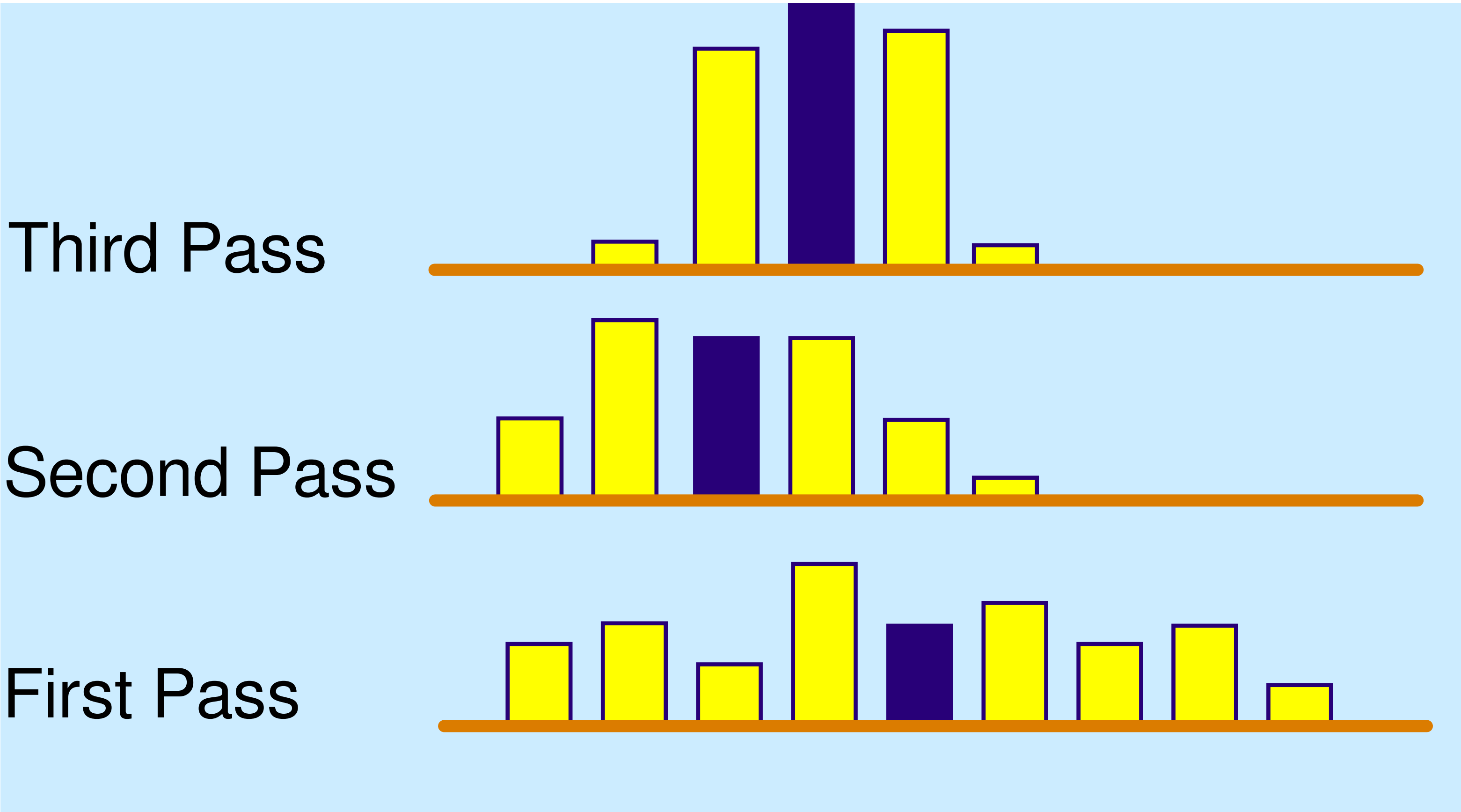


Figure 15-12

Basic Tool: Pareto Analysis

Steps in the Pareto Analysis:

- Collect data on reasons for the failure or anomaly
- Group the data into similar cause groups
- Count the number of data items in each group
- Plot the histogram from highest to lowest frequency
- Tackle the causes with the highest frequency first

Basic Tool: Pareto Analysis

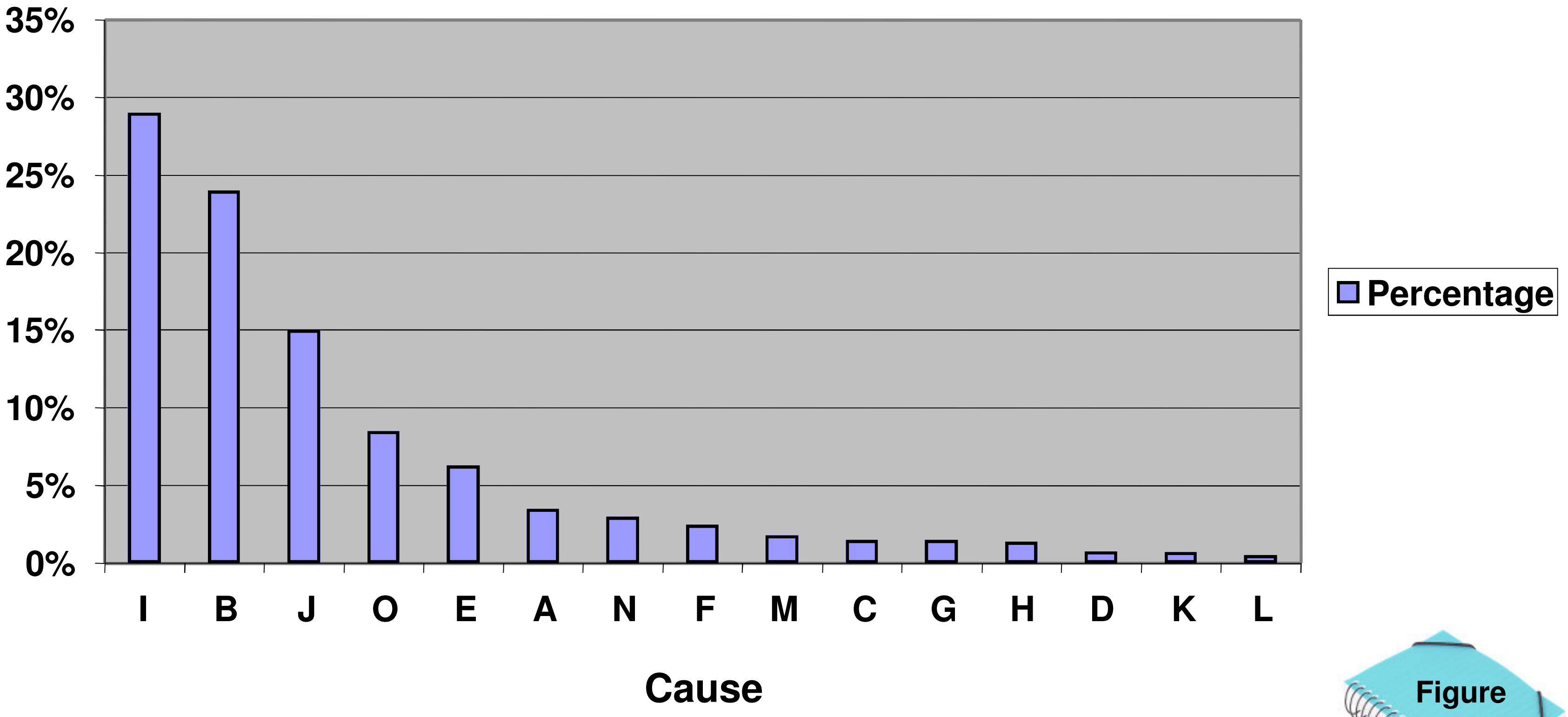
- We have 15 causes for failure (A – O).
- Which cause do we address first?
    - Pareto = the 80/20 rule
    - Gather the frequencies, sort, and chart

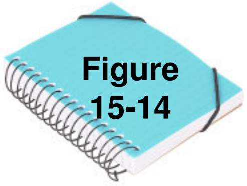
ID	Cause	# Failures
A	Late arrival	35
B		250
C		15
D		8
E		36
F		25
G		15
H		14
I	Missing part	350
J	Access	150
K		7
L		5
M		18
N		30
O		42
		1000

Figure 15-13

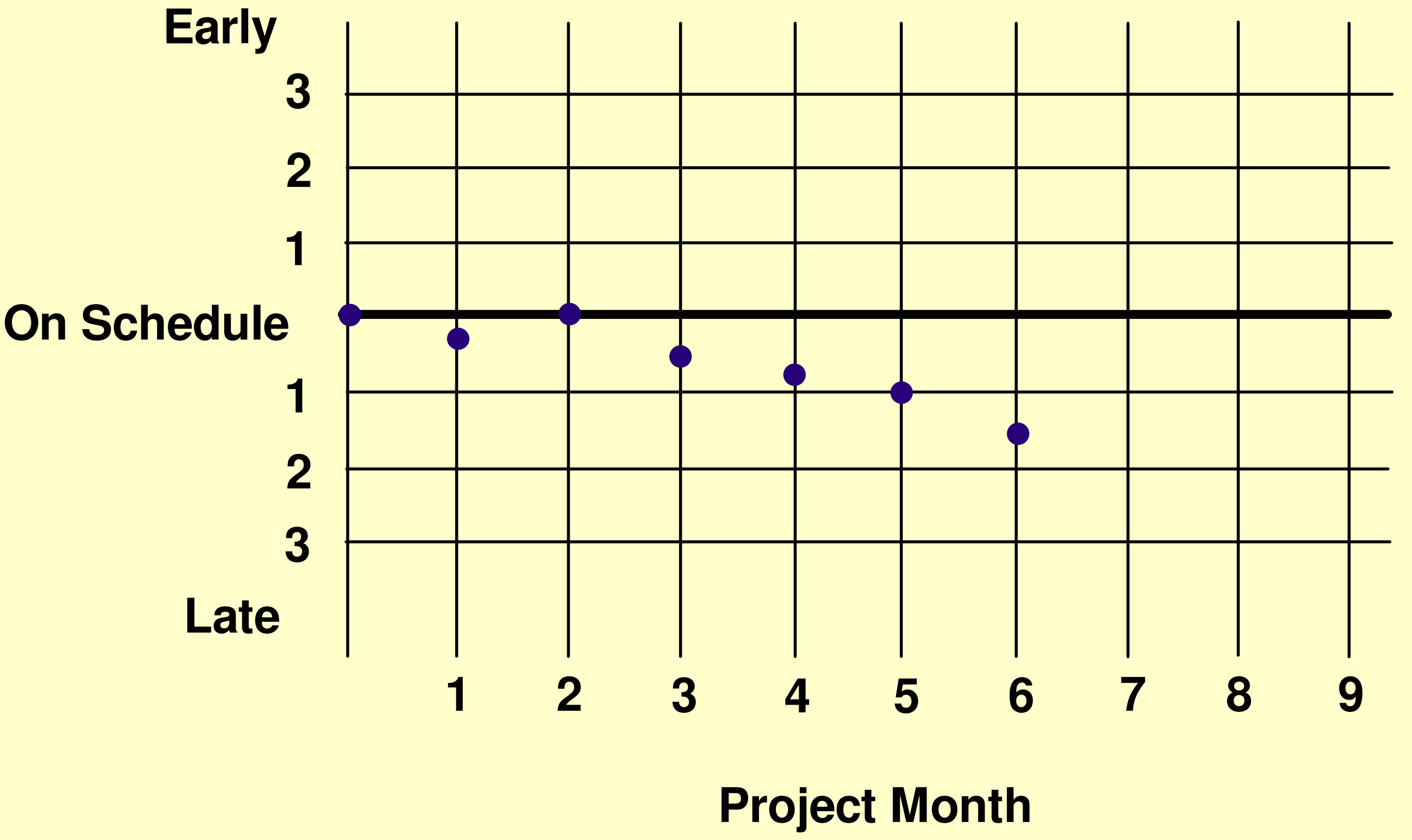
Pareto Analysis

Our top choice is easy to see.





Basic Tool: Run Charts



A run up or down of four or more successive data points

Figure 15-15

Basic Tool: Scatter Diagrams

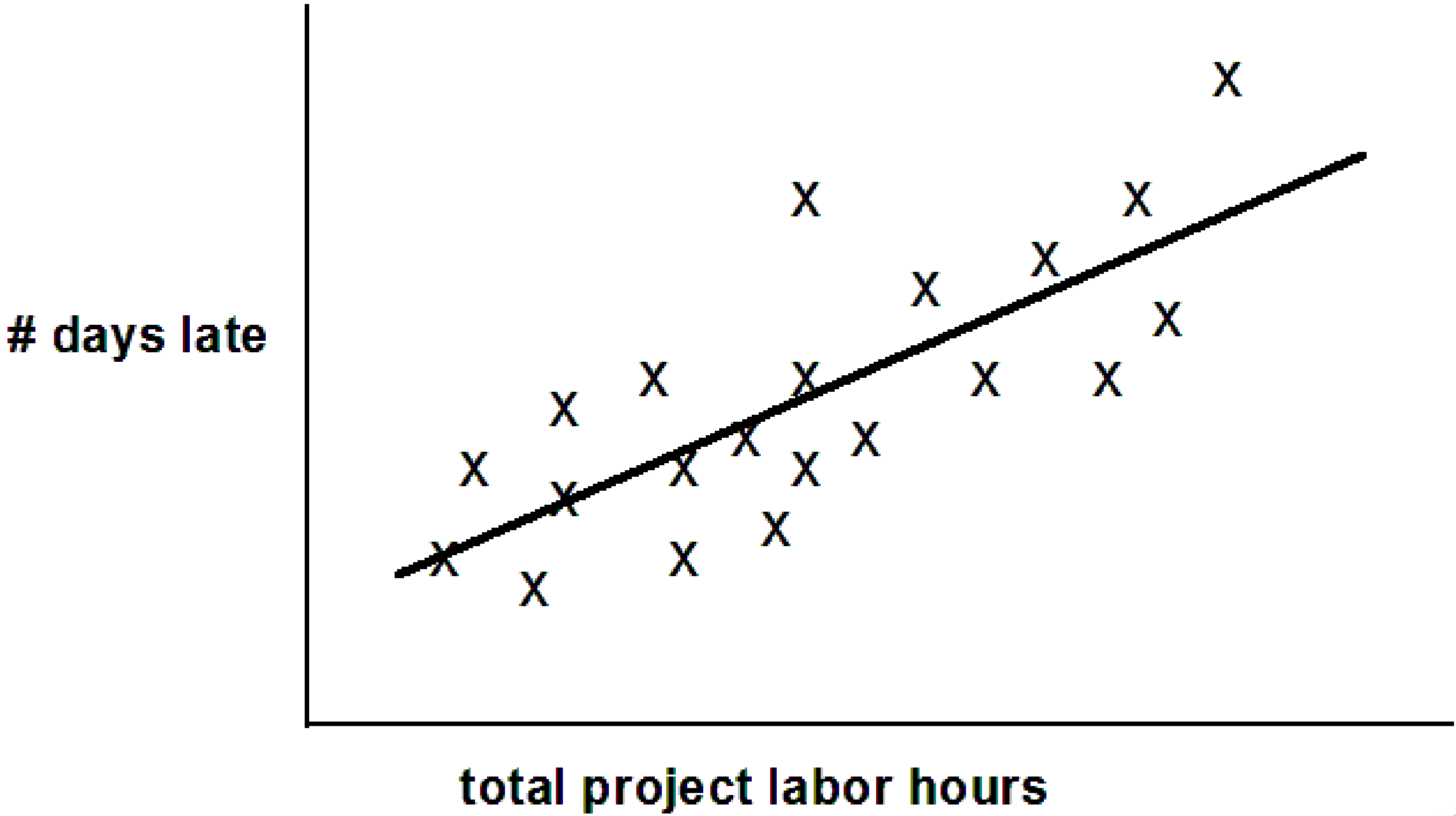
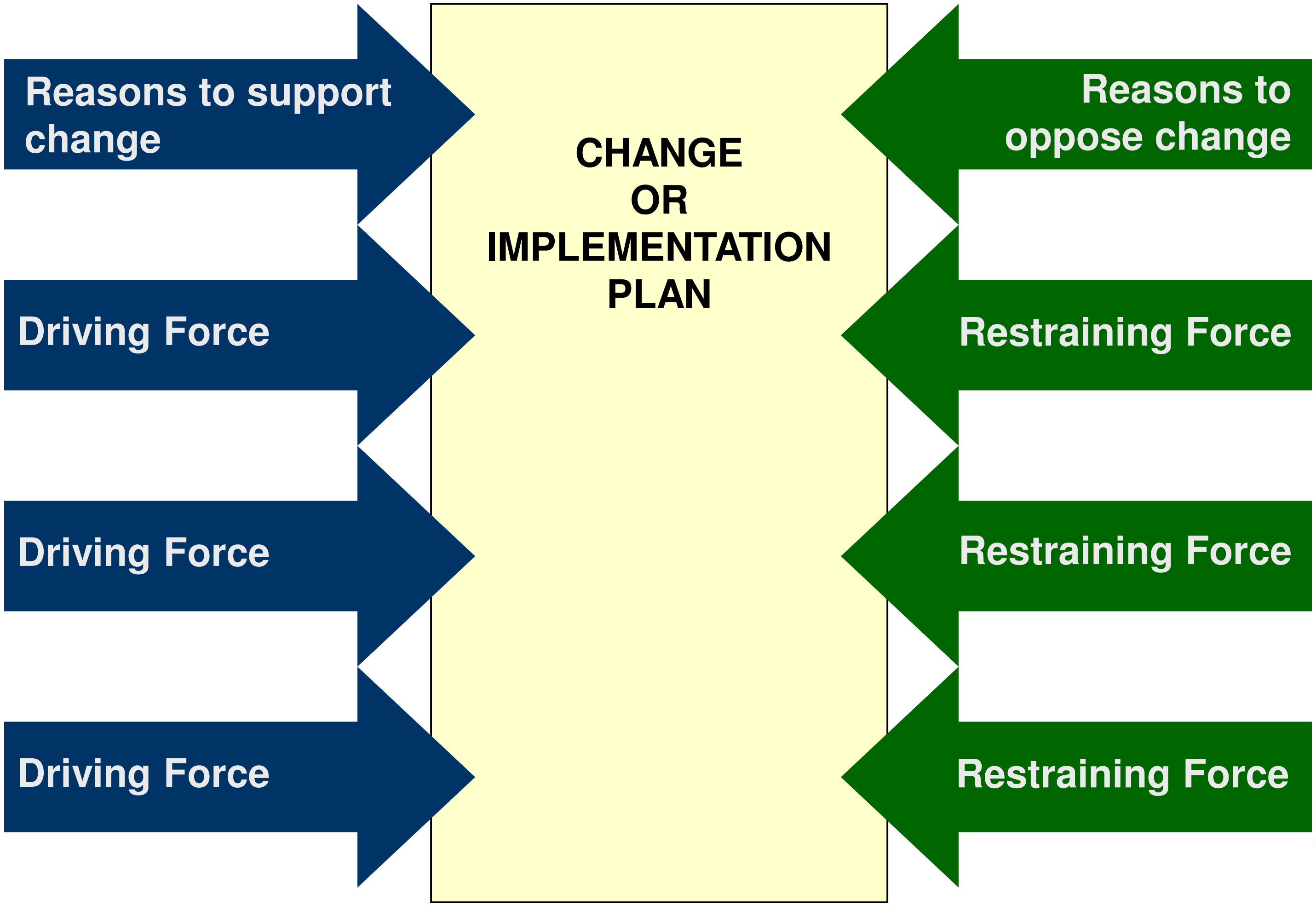


Figure 15-16

Bonus Tool: Force Field Analysis



Reasons to support change

Driving Force

Driving Force

Driving Force

CHANGE
OR
IMPLEMENTATION
PLAN

Reasons to oppose change

Restraining Force

Restraining Force

Restraining Force

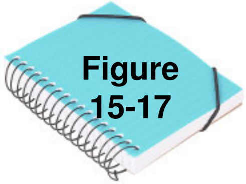
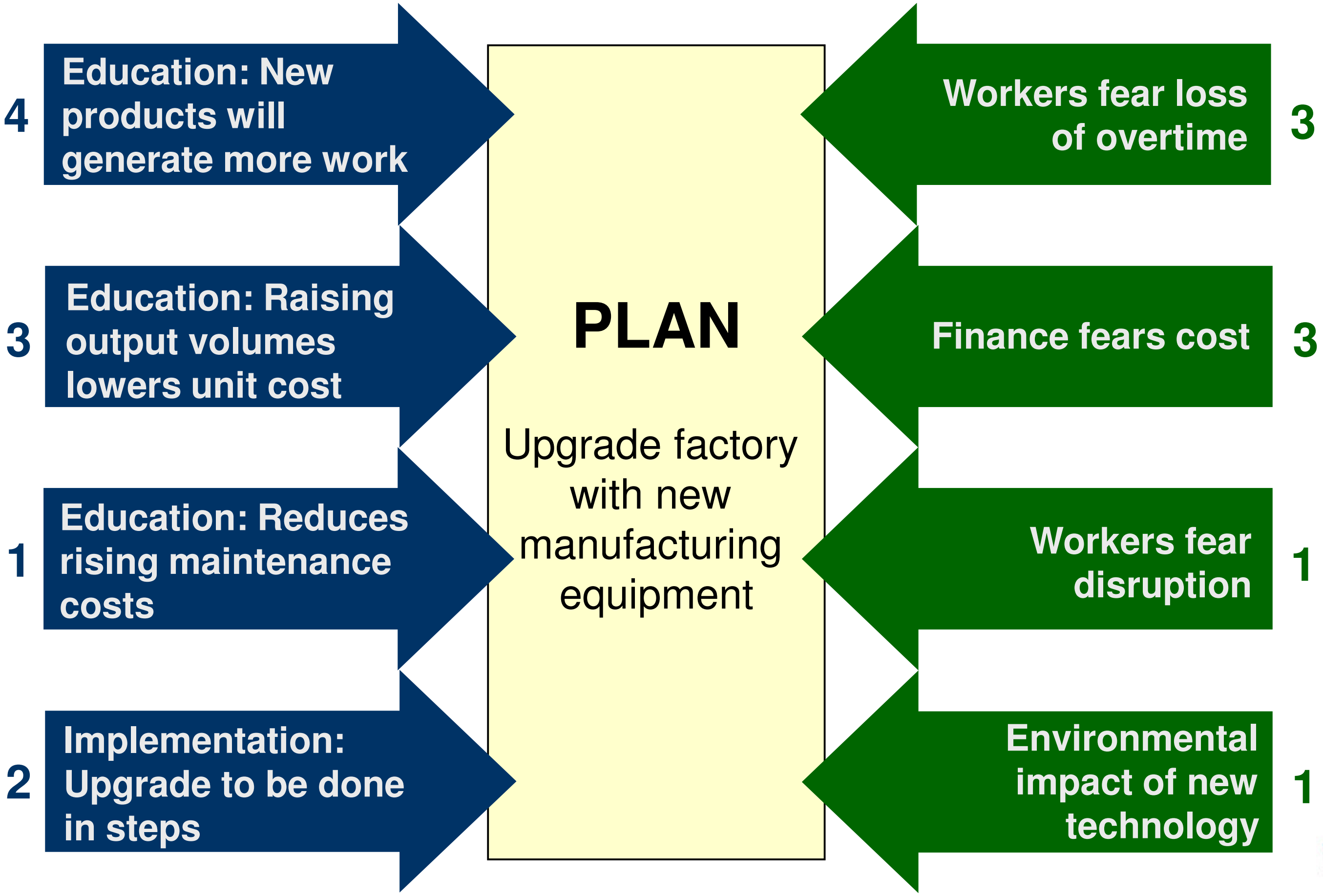


Figure 15-17

Bonus Tool: Example – Force Field Analysis



PLAN

Upgrade factory with new manufacturing equipment

4 Education: New products will generate more work

3 Education: Raising output volumes lowers unit cost

1 Education: Reduces rising maintenance costs

2 Implementation: Upgrade to be done in steps

Workers fear loss of overtime 3

Finance fears cost 3

Workers fear disruption 1

Environmental impact of new technology 1

Figure 15-18

Bonus Tool: Force Field Analysis

How to Conduct a Force Field Analysis

1. Convene a team
2. Describe the desired change or a barrier to the change
3. Consider each restraining force and develop one or more ideas and associated actions (driving forces) to overcome or reduce the effect of that restraining force
4. Sort the driving forces according to priority based upon impact and time to implement
5. Incorporate the priority driving forces into the project implementation action plan

Trigger Values

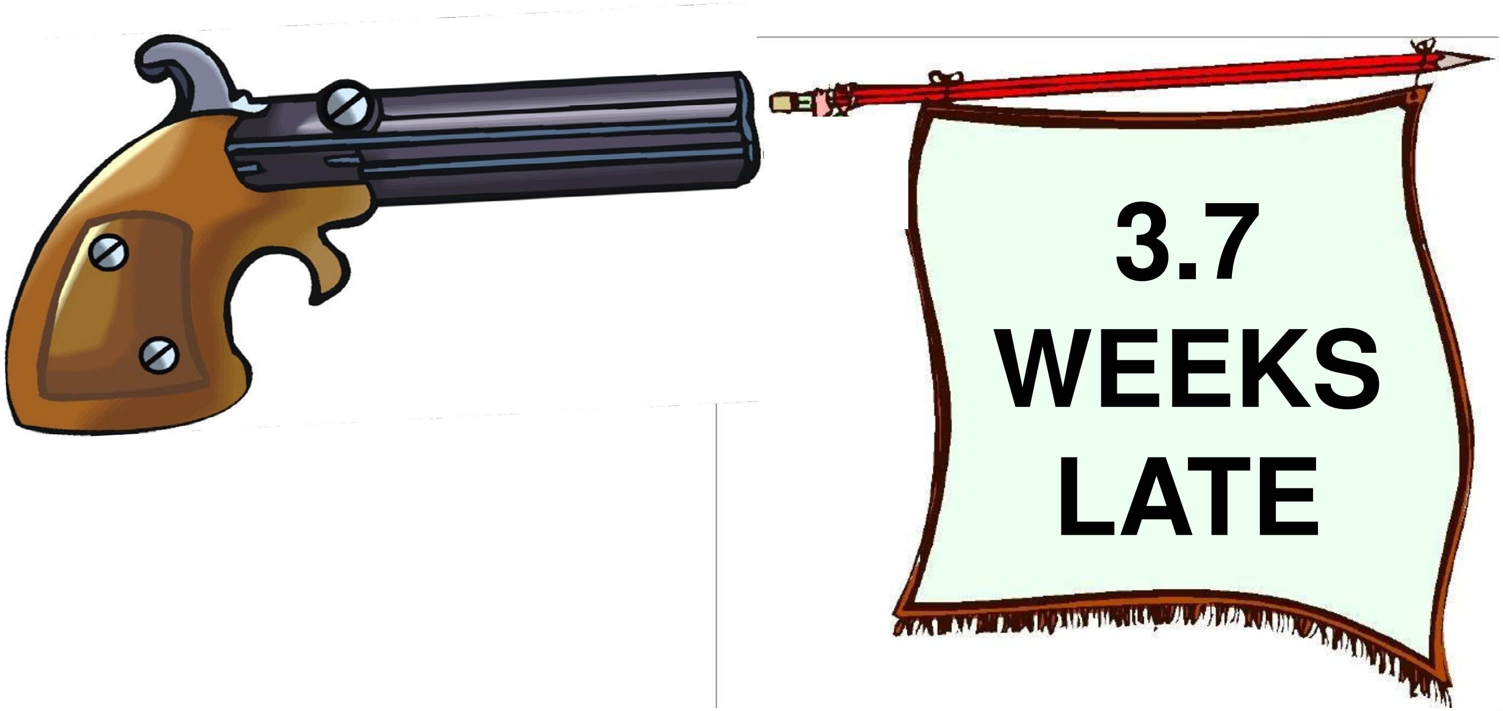


Figure 15-19

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch16: Prevention and Intervention Strategies for Distressed Projects

Presented by
(facilitator name)

Summary of Chapter 16

- What is a distressed project?
- Prevention strategies
- Intervention strategies
- Roles and responsibilities of the PSO with respect to distressed projects

Ch16: Prevention & Intervention Strategies …

What is a distressed project?

- A project that has exhibited a performance trend that, if continued, will result in certain failure.
- A project whose performance has exceeded one or more metric values and is now a high risk for failure.
- A project that has recently experienced some significant change that may result in its failure.

Ch16: Prevention & Intervention Strategies …

Typical causes leading to distressed projects

- Poor, inadequate, or NO requirements definition
- Inappropriate or insufficient sponsorship
- Complexity of requirements not recognized
- Unwillingness to make tough decisions
- Lag between project approval and kick-off
- No plan revision after significant cuts in resources or time
- Estimates done with little planning or thought
- Over commitment of staff resources
- Inconsistent client sign-off
- No credibility in the baseline plan
- Unmanageable project scope

Ch16: Prevention & Intervention Strategies …

Strategies for dealing with distressed projects

- Prevention strategies
- Intervention strategies

Ch16: Prevention & Intervention Strategies …

Prevention Strategies – Tools, templates, and processes

- Requirements gathering
- WBS construction
- Dynamic Risk Management Process
- Scope Change Management Process
- Milestone Trend Charts*
- Earned Value Analysis*

* Details provided

Conservative trend patterns

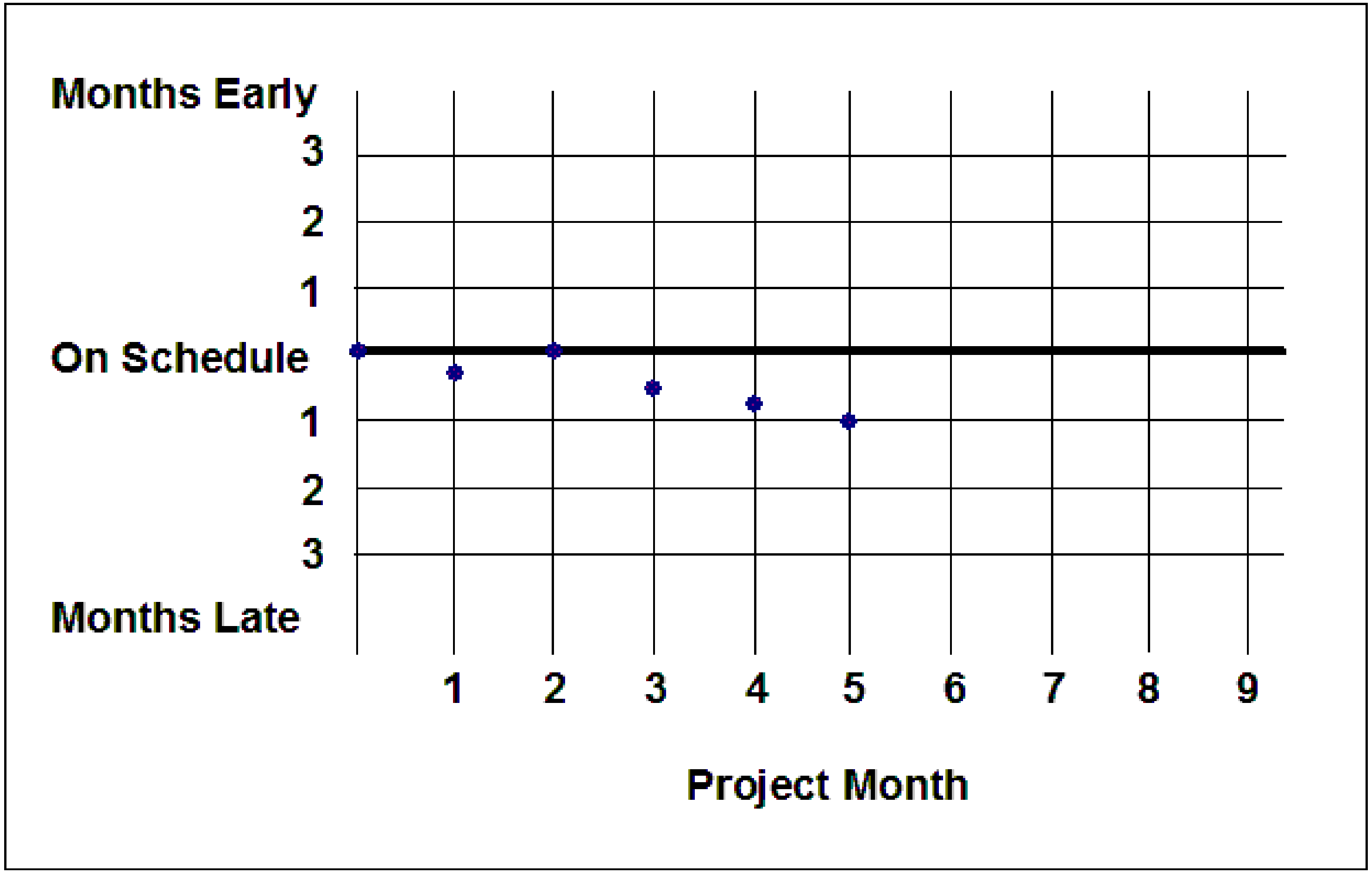


Figure 16-01

Tighter control limits as an early warning…

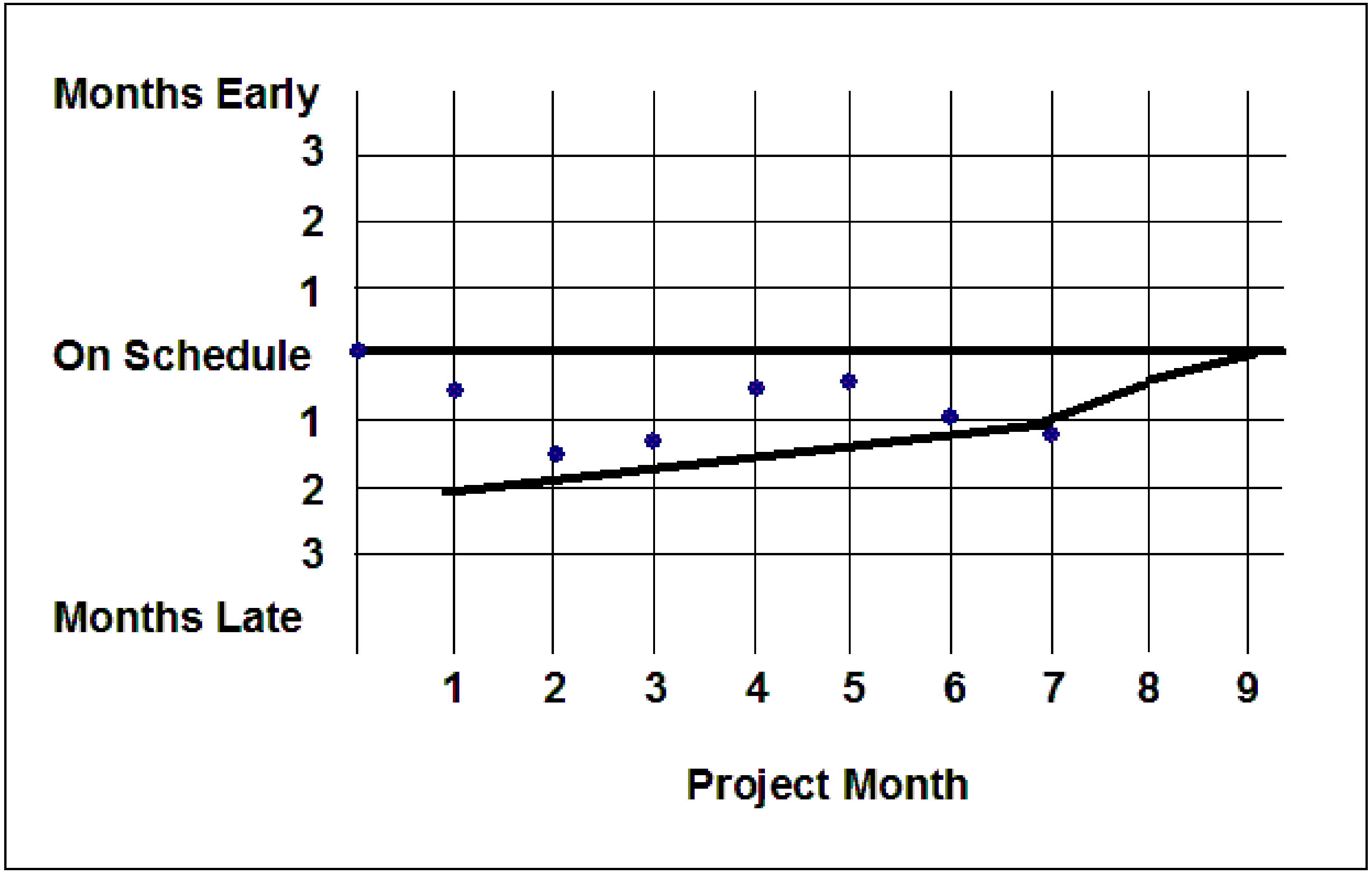


Figure 16-02

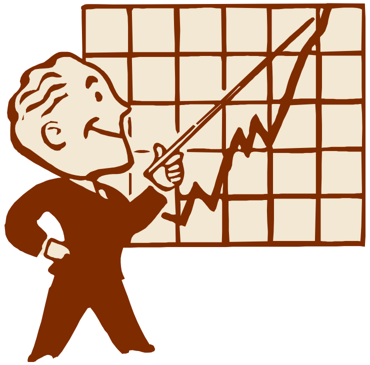
Ch16: Prevention & Intervention Strategies …

Earned Value – Basic Performance Indices

Schedule Performance Index (SPI)

A measure of how close the project is to performing work as it was actually scheduled.

SPI = EV/PV



Cost Performance Index (CPI)

A measure of how close the project is to spending on the work performed to what was planned to have been spent.

CPI = EV/AC

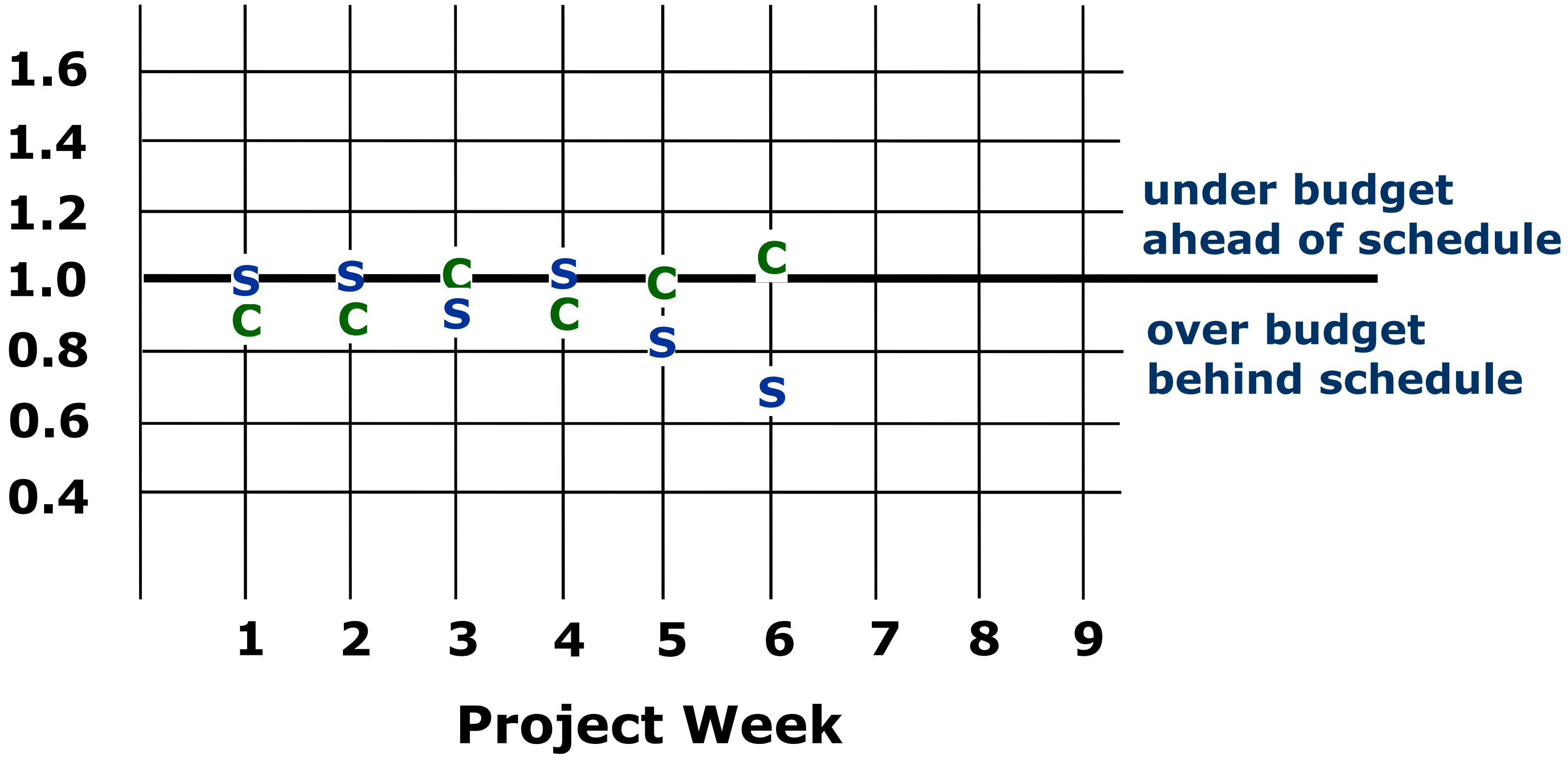
INDEX VALUES

< 1: over budget or behind schedule

> 1: under budget or ahead of schedule

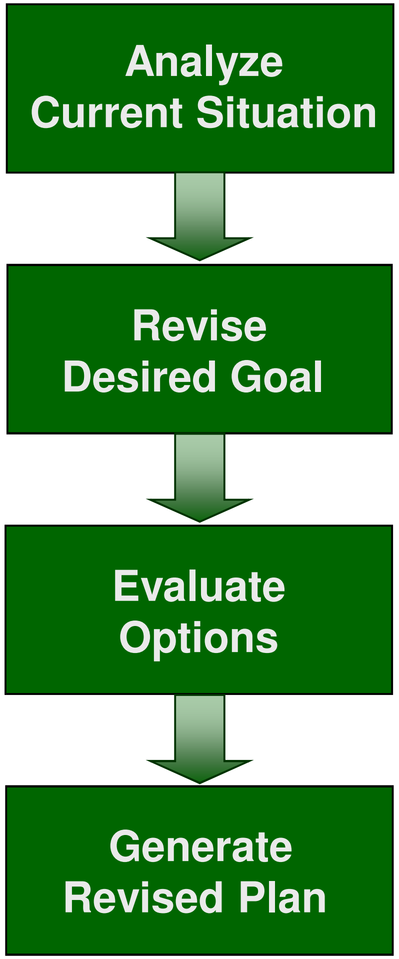
Earned Value – Performance Indices

Project: ALPHA



Ch16: Prevention & Intervention Strategies …

The Intervention Process



Team — **Analyze Current Situation** — Where are we?

Client — **Revise Desired Goal** — Where can we go?

Team/Client — **Evaluate Options** — How can we get there?

Team/Client — **Generate Revised Plan** — How will we get there?

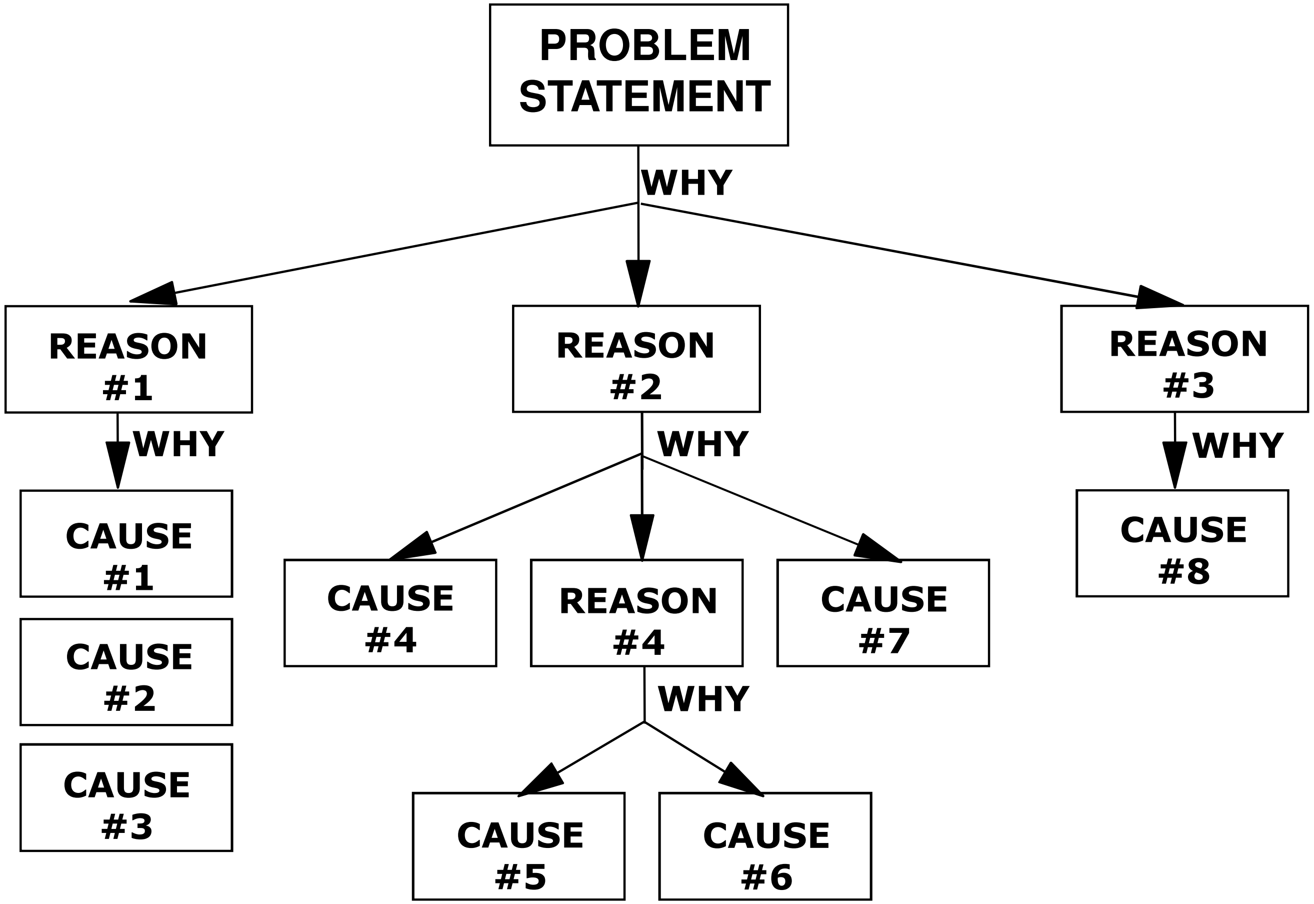
Figure 16-03

Status of the Current Deliverables

DELIVERABLE	COMPLETE	STATUS	COMMENTS
A	Yes		Completed 2 days late
B	No	3 days behind	Error in specification
C	No	6 days behind	Key resource not available
D	No	12 days behind	Key resource not available
E	No	12 days behind	Not yet open for work

Figure 16-04

Root Cause Analysis



PROBLEM STATEMENT

WHY

REASON #1

REASON #2

REASON #3

WHY

CAUSE #1

CAUSE #2

CAUSE #3

WHY

CAUSE #4

REASON #4

CAUSE #7

WHY

CAUSE #8

WHY

CAUSE #5

CAUSE #6

Ch16: Prevention & Intervention Strategies …

Root Causes – Project Conception

- Project based on unrealistic business case
- Project is based on executive leverage
- Client cannot clearly define objectives
- Project based on state-of-the-art and immature technology
- Lack of client ownership
- Client funding and/or timescale unrealistic
- Failure to decompose the project into smaller feasible steps

EII

Ch16: Prevention & Intervention Strategies …

Root Cause – Project Planning & Initiation

- Unrealistic cost, time, and capability estimates
- Failure to clearly define requirements
- Poor client/team relationships
- Poor scoping activities
- Lack of meaningful client involvement
- Poor WBS specification
- Unreliable risk management plan
- Poor planning
- Failure to clearly define roles and responsibilities

Ch16: Prevention & Intervention Strategies …

Root Cause – Solution Definition

- Failure to apply appropriate scope management
- Poor choice of technical platform/architecture
- Starting a phase prematurely
- Poor choice and preparation of requirements definition approach
- Lack of proper design reviews
- Lack or loss of skilled resources
- Poor standards deployment
- Poor requirements traceability

Ch16: Prevention & Intervention Strategies …

Root Cause – Solution Development

- Project overtaken by technology advances
- Lack of proper change control
- Inadequate training and supervision
- Inadequate client review
- Poor management of outside contractors
- Lack of formal testing and integration approaches

Ch16: Prevention & Intervention Strategies …

Root Cause – Solution Implementation

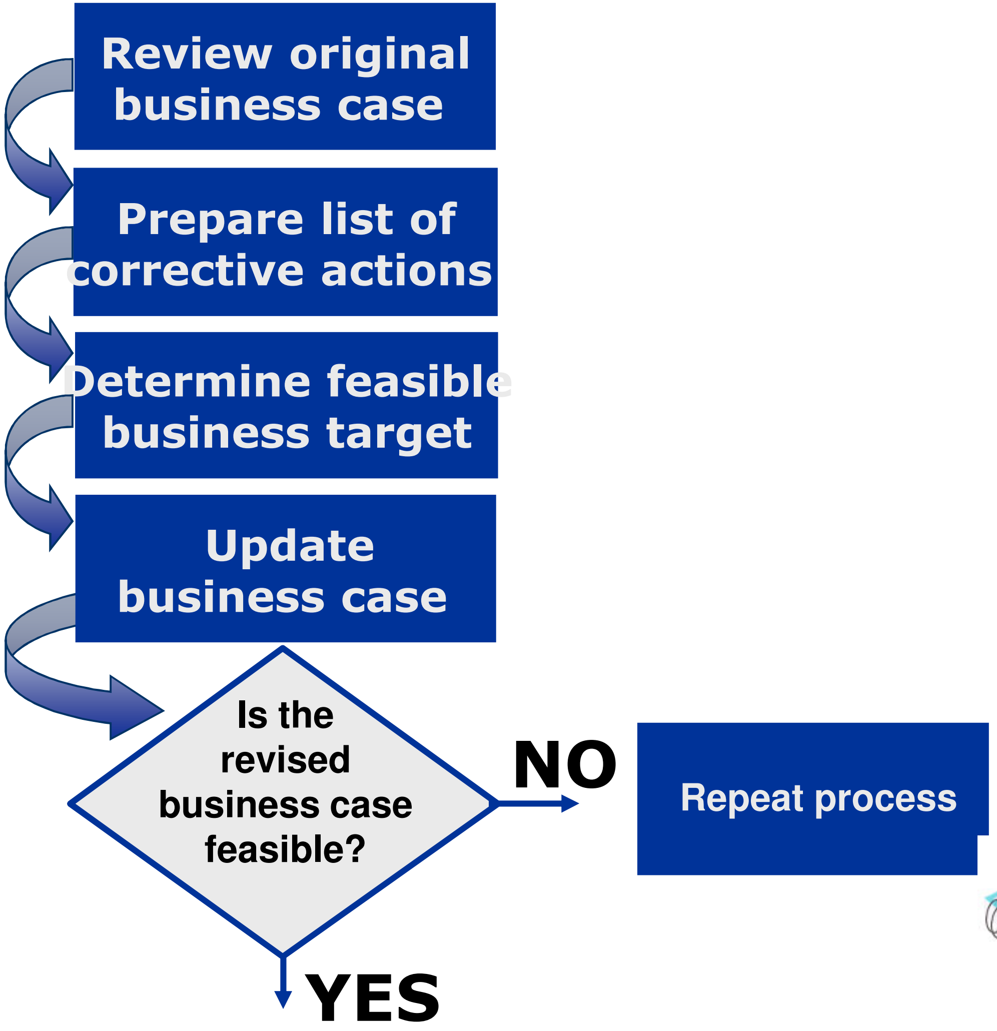
- Inadequate client/end user training and support
- Catastrophic failure with no mitigation plans
- Missing a critical go live date

Ch16: Prevention & Intervention Strategies …

Revise original goal – Prepare Workshop Environment

1. Hold workshop offsite at a comfortable hotel
2. A good restaurant
3. Large room with lots of whiteboard space
4. Several flip chart stands
5. Breakout rooms for private discussions
6. Use an experienced outside facilitator
7. Agree on the ground rules

The Process of Revising the Project Goal



Review original business case

Prepare list of corrective actions

Determine feasible business target

Update business case

Is the revised business case feasible?

NO

Repeat process

YES

Figure 16-05

Ch16: Prevention & Intervention Strategies …

Review original business goal

- Review the original business case
- Review the current business needs
- Align the business case to current business needs

RESULT

Change of requirements and/or Reprioritizing of requirements

Ch16: Prevention & Intervention Strategies …

Prepare list of corrective actions

- General
- Requirements
- Design, Development, and Integration
- Testing and Implementation

Ch16: Prevention & Intervention Strategies …

General corrective actions

- Strengthen/replace/reorganize management where needed
- Implement improvements in development and test environment where needed
- Consider redistributing work to COTS vendors

Ch16: Prevention & Intervention Strategies …

Requirements corrective action

- Establish a client-based scope change request process
- Remove functionality where the business case is weak
- Prioritize functionality (MoSCoW)
- Review requirements for any package customization
- Prioritize functionality by business unit and remove as required

Ch16: Prevention & Intervention Strategies …

Design, Development/Integration (corrective actions)

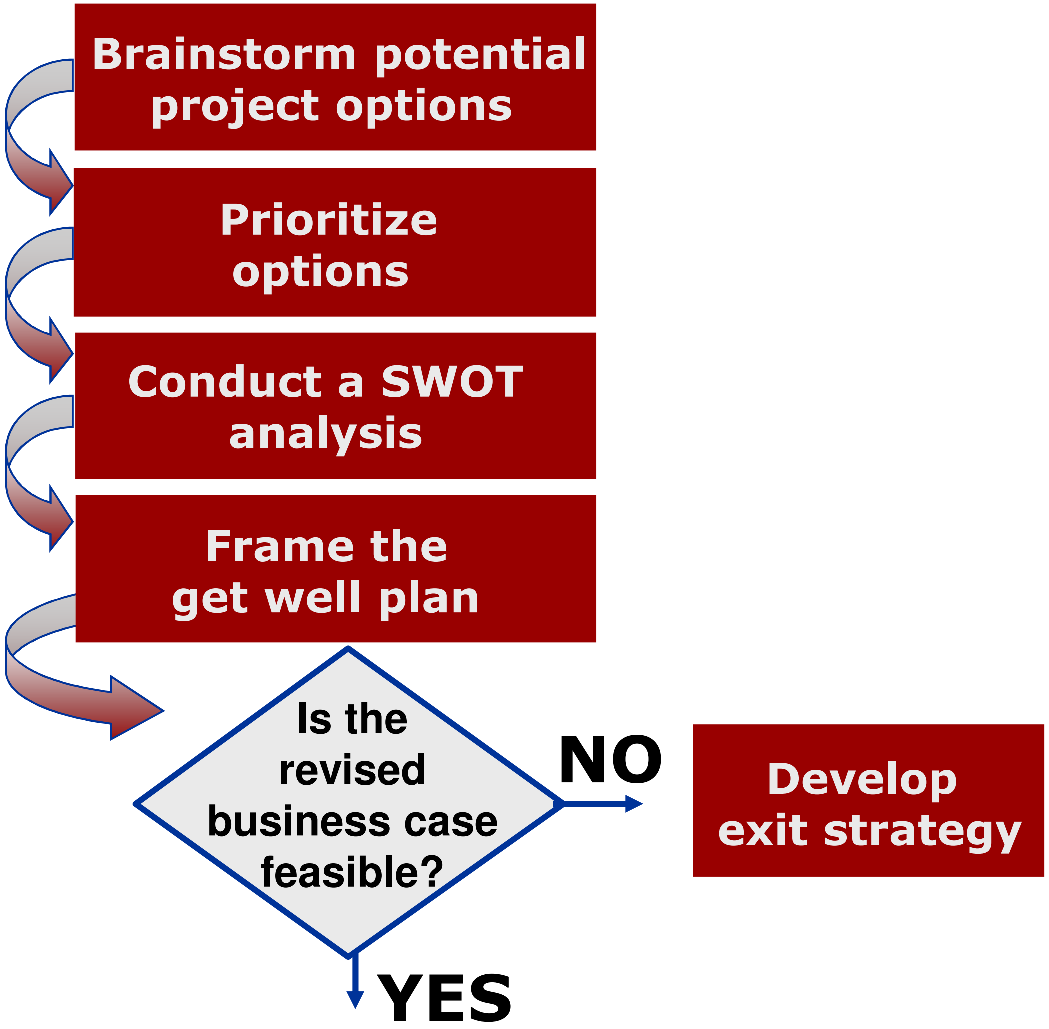
- Review the solution for more use of COTS
- Partition into swim lanes for schedule compression
- Consider incremental releases
- Simplify interfaces to external applications

Ch16: Prevention & Intervention Strategies …

Testing and Implementation

- Consider incremental user testing
- Use pilots for early release

How can we get there? – Evaluating options



Brainstorm potential project options

Prioritize options

Conduct a SWOT analysis

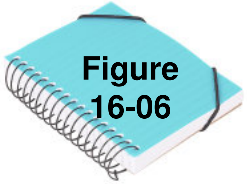
Frame the get well plan

Is the revised business case feasible?

NO

Develop exit strategy

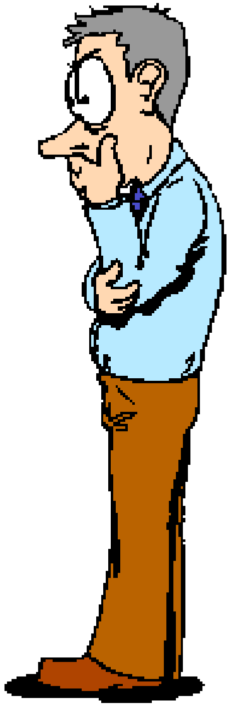
YES



Ch16: Prevention & Intervention Strategies …

SWOT Analysis Areas

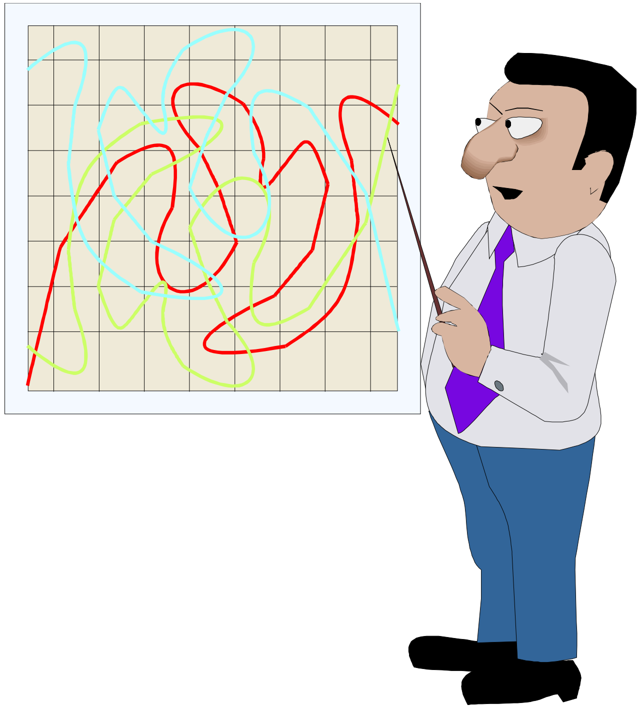
- The degree of PSO support offered to the project team throughout the PMLC model for this option
- The skill and competency profile of the team with respect to this option
- The degree to which the client has been meaningfully involved in the project and will be able to support this option
- The contents of the scope bank related to option



Ch16: Prevention & Intervention Strategies …

How will we get there? – The steps to revise the plan

- Prepare revised project plan
- Get management acceptance of revised plan
- Prepare to re-start the project



Ch16: Prevention & Intervention Strategies …

Prepare revised plan

- Revised deliverables and milestone dates
- Create a new deliverables-based WBS
- Duration, labor, resources
- Schedule to meet milestone dates
- Updated risk management plan
- Closely monitor performance metrics
- Tightly controlled scope change management process

Ch16: Prevention & Intervention Strategies …

Get management acceptance

- Client meaningfully participates in project planning and supports the plan
- Management approval to start

Ch16: Prevention & Intervention Strategies …

Prepare to re-start the project

- Assuring that the team's skills and competencies are correctly aligned with the revised project
- Clearly defined roles and responsibilities
- A revised risk management plan is in place and assigned to a team member
- A defined monitoring system is in place to detect any suspect trends in schedule or cost variances

Ch16: Prevention & Intervention Strategies …

Roles & Responsibilities of the PSO

- Analyze current situation
- Revise desired goal
- Evaluate options
- Generate revised plan

Ch16: Prevention & Intervention Strategies …

An intervention process template

Step 1: Determine sponsor expectations and intervention

Step 2: Define problem(s) and assign owner(s)

Step 3: Assemble intervention team and establish intervention process

Step 4: Conduct Root Cause Analysis and Force Field Analysis

Step 5: Develop corrective action plan

Step 6: Revise project scope

Step 7: Revise project plan and deliverables

Step 8: Gain sponsor approval and authorization to continue the project

Roles & responsibilities of the PSO with respect to distressed projects

- Analyzing the current situation
- Revising the desired goal
- Evaluating options
- Generating the revised plan

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in
the Face of Uncertainty

Ch17: Managing Multiple Team Projects

Presented by
(facilitator name)

Ch17: Organizing Multiple Team Projects

Summary of Ch17

- What is a Multiple Team Project?
- Challenges to Managing a Multiple Team Project
- Classifying Multiple Team Projects
- Project Office Structure
- Core Team Structure
- Super Team Structure

What is a Multiple Team Project?

A multiple team project is any project that requires the collaboration and involvement of two or more independent teams.

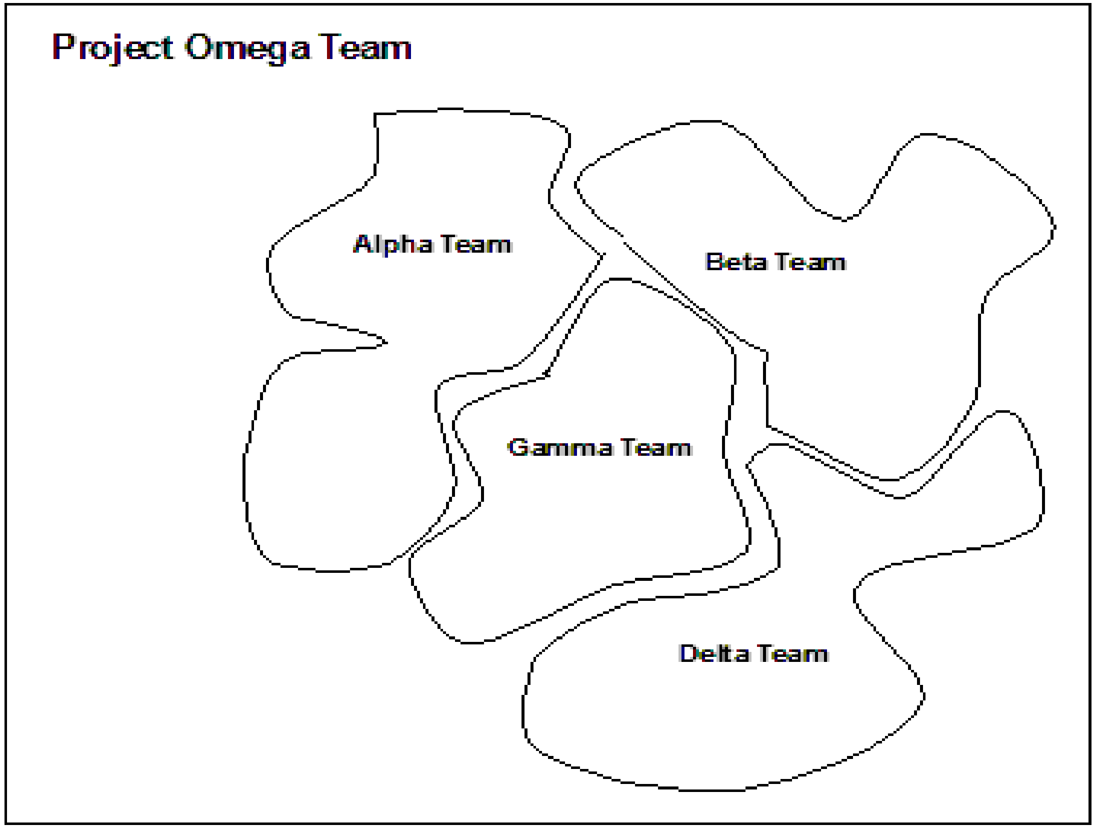


Figure 17-01

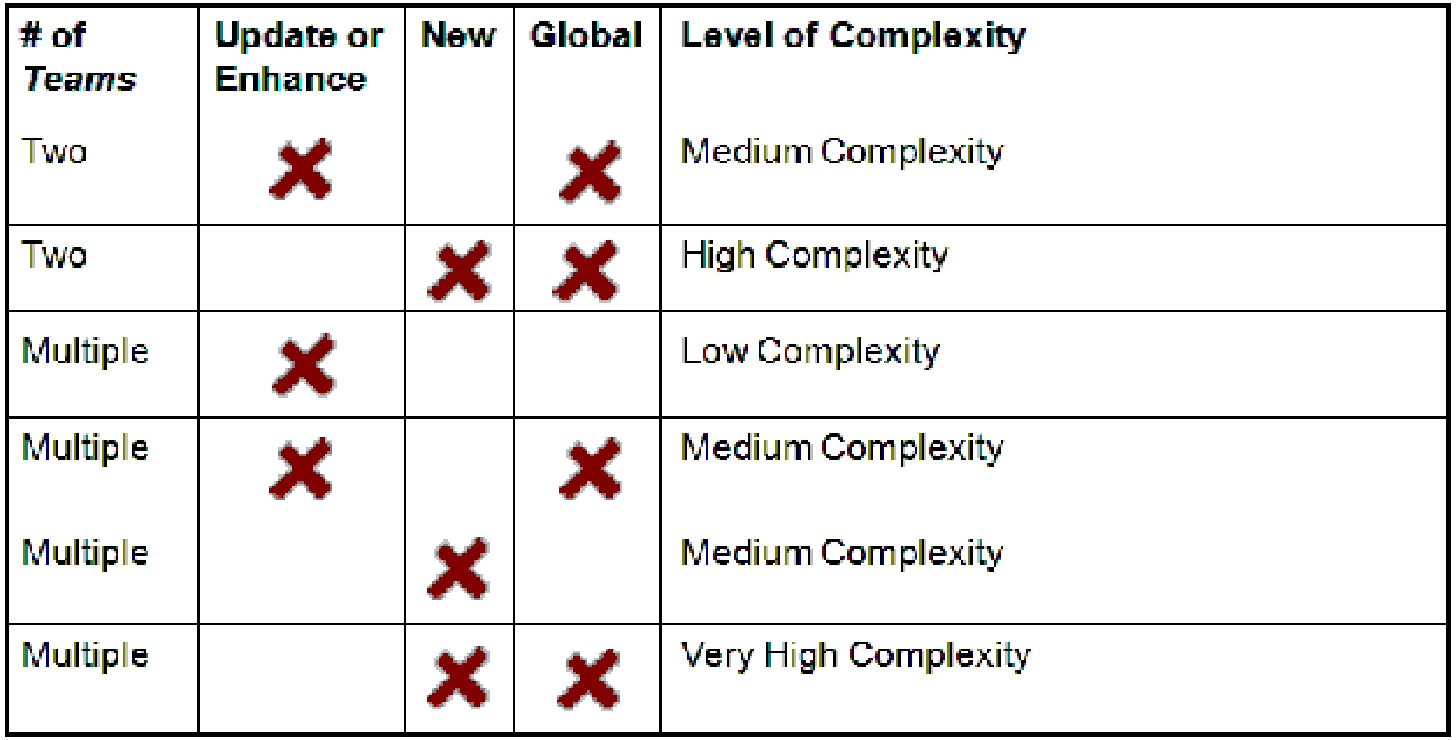
Ch17: Organizing Multiple Team Projects

Challenges to Managing a Multiple Team Project

- Working with teams from different companies
- Working with fiercely independent teams
- Working with different team processes
- Accommodating competing priorities
- Communicating within the team structure
- Establishing a project management structure
- Establishing one PMLC
- Building an integrated project plan/schedule
- Defining a requirements gathering approach
- Establishing a scope change management process
- Defining the team meeting structure
- Establishing manageable reporting levels
- Sharing resources across teams
- Staffing across the PMLC
- Searching out your second

Ch17: Organizing Multiple Team Projects

Types of Multiple Team Projects



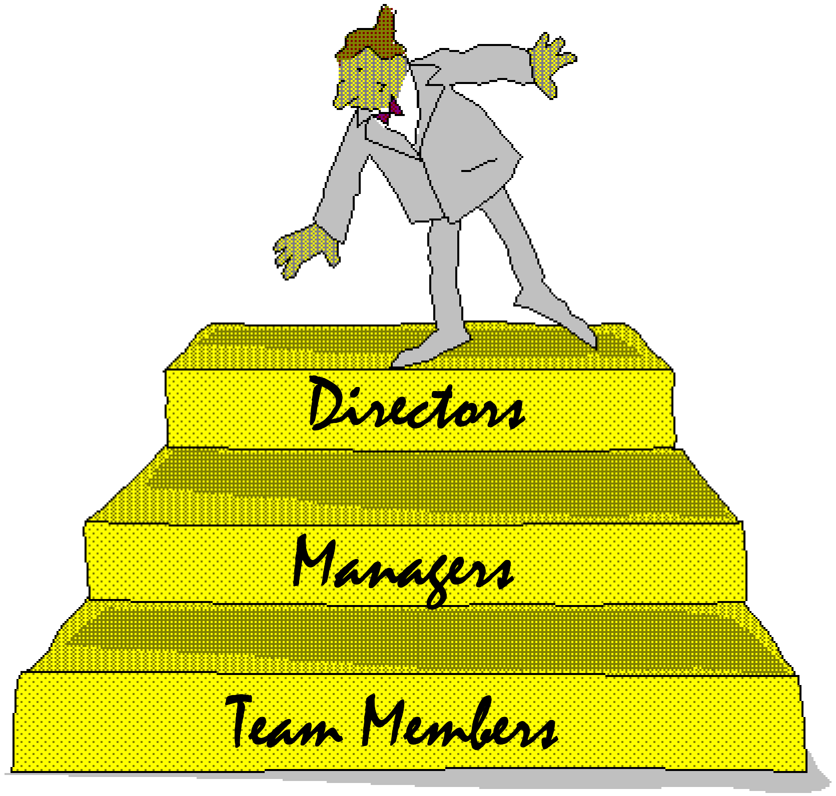
# of *Teams*	**Update or Enhance**	**New**	**Global**	**Level of Complexity**
Two	✗		✗	Medium Complexity
Two		✗	✗	High Complexity
Multiple	✗			Low Complexity
Multiple	✗		✗	Medium Complexity
Multiple		✗		Medium Complexity
Multiple		✗	✗	Very High Complexity

Figure 17-02

Ch17: Organizing Multiple Team Projects

Project Organizational Structures

- Project Office
- Core Team
- Super Team
- Hybrids



Project Office Definition

- A project office is a
  - temporary management structure
  - established to coordinate and support
  - the work of several independent teams
  - who are concurrently working on a single project that
  - has task dependencies across the team structure

NOTE: Do not confuse this with a Project Management Office (PMO).
A PMO is a permanent structure that supports all projects.

Project Office Structure

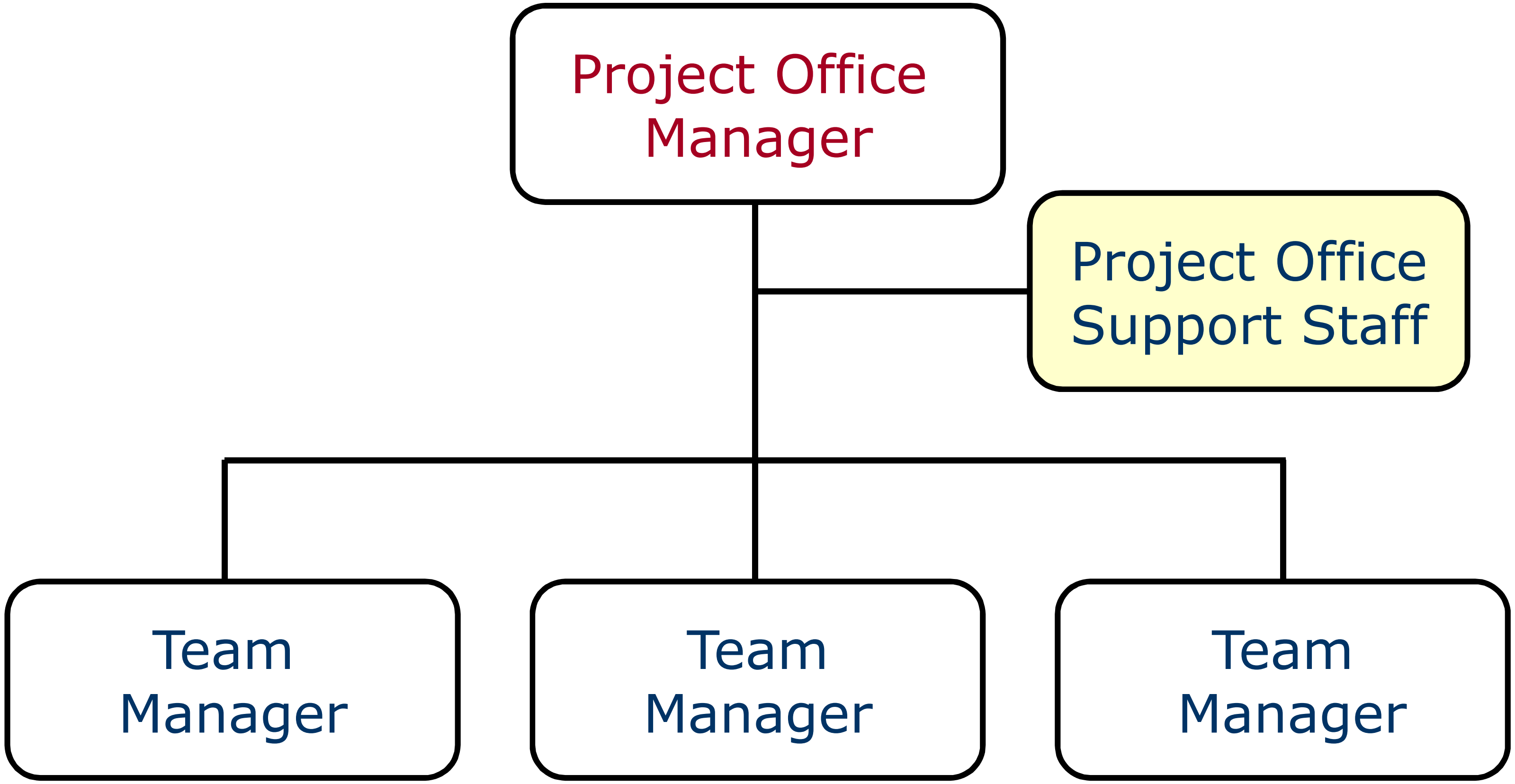
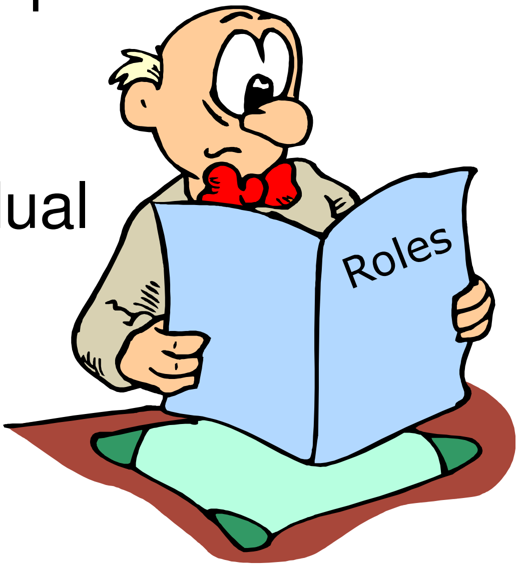


Figure 17-03

Ch17: Organizing Multiple Team Projects

Project Office Roles and Responsibilities

- Organize and manage entire project
- Develop high-level project plan with project leads
- Integrate and coordinate project plans of each team
- Maintain the overall project schedule
- Monitor and manage resource use
- Prepare and distribute project status reports
- Plan and conduct team meetings
- Process scope change requests
- Solve problems escalated from individual project teams
- Negotiate and resolve problems between teams



Project Office Strengths and Weaknesses

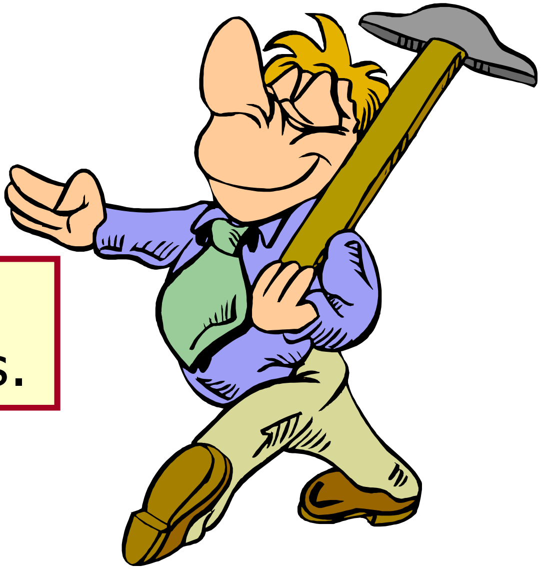
- Strengths
  - Coordinates the work of several ISD teams
  - Scales to very large projects
  - Managed from a single integrated plan
  - Integrated resource management control
  - Allows teams to maintain their practices

- Weaknesses
  - Requires management across disparate practices
  - Requires team members to manage competing priorities
  - May involve a cumbersome scope change management process

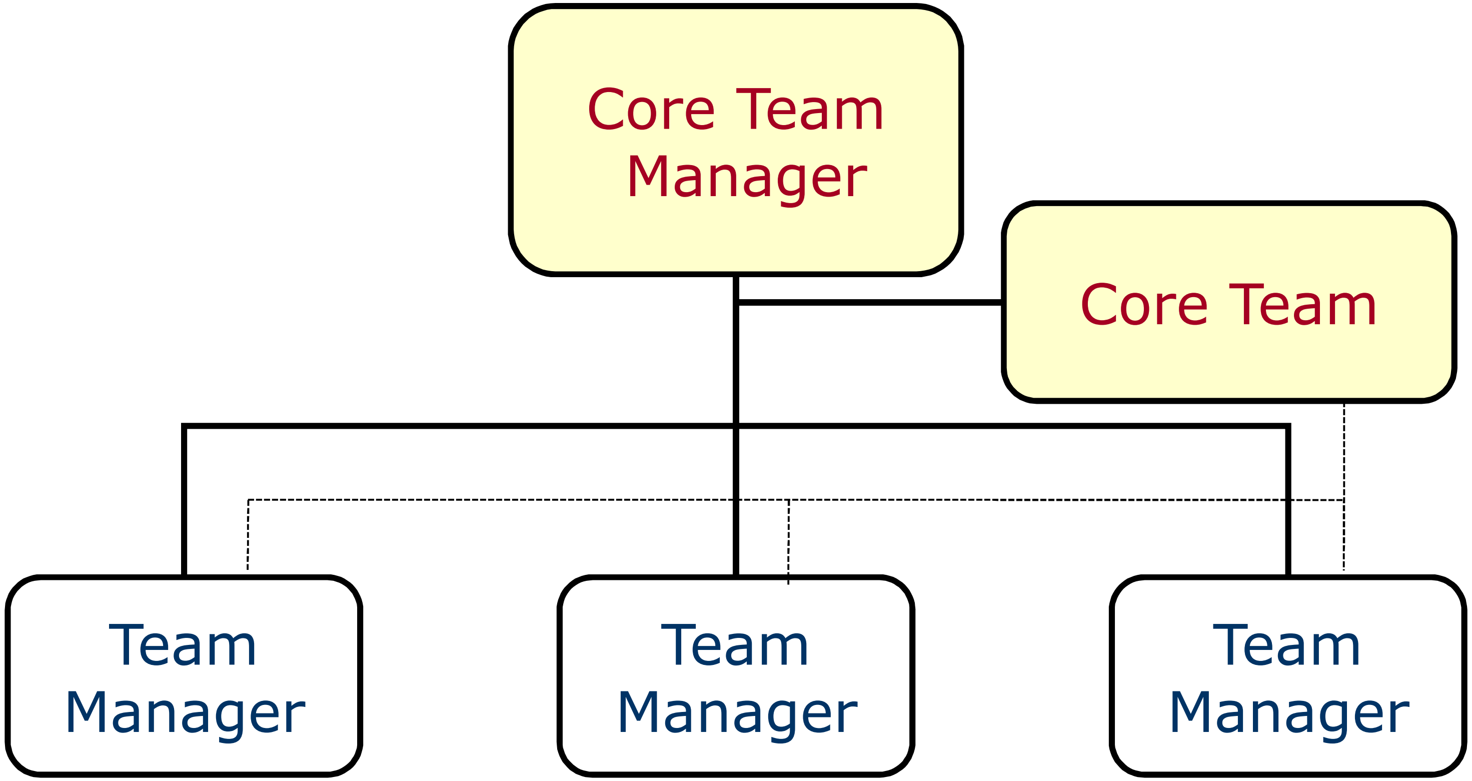
Core Team Definition

- A core team is
  - A temporary team comprised of a small number of SMEs
  - chosen and managed by the senior project manager managing the project and
  - who consult, advise, and support
  - the work of all the teams
  - working on this project

NOTE: This is the approach commonly used for critical multiple team projects.



Core Team Structure


Core Team Manager

Core Team

Team Manager

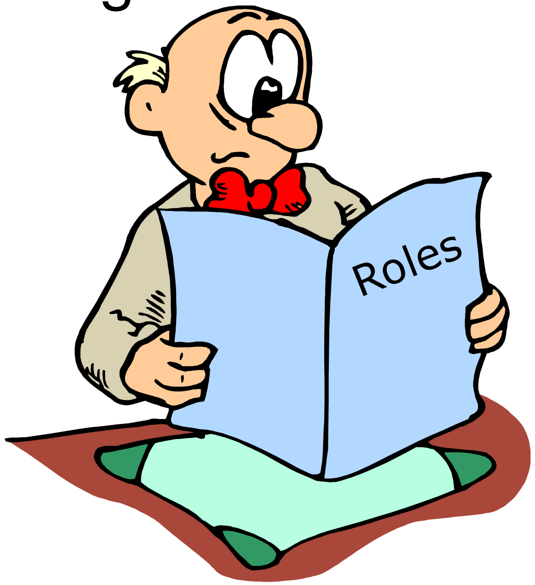
Team Manager

Team Manager

Figure 17-04

Core Team Roles and Responsibilities

- Advise each team on technical matters
- Provide subject matter expertise on enterprise systems and processes
- Support each project team as requested and as needed
- Collaborate with and advise the CT manager as requested
- Negotiate and help resolve inter-team problems



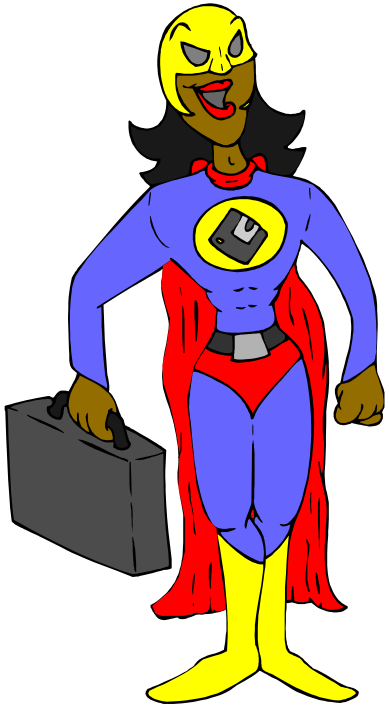
Core Team Strengths and Weaknesses

- Strengths
  - Enables the CT Manager to select CT members
  - Provides the best available advice to the CT manager
  - Coordinates the work of several teams
  - Lends support and credibility to the decisions of the CT Manager
  - Assigns CT members 100 percent to a this project
  - Takes advantage of the most experienced SMEs
  - Allows teams to maintain their business unit practices

- Weaknesses
  - May not scale to the larger projects
  - Does not necessarily integrate individual team plans
  - Must manage across disparate practices
  - May have to deal with divided loyalties
  - Repeatedly uses the same SMEs

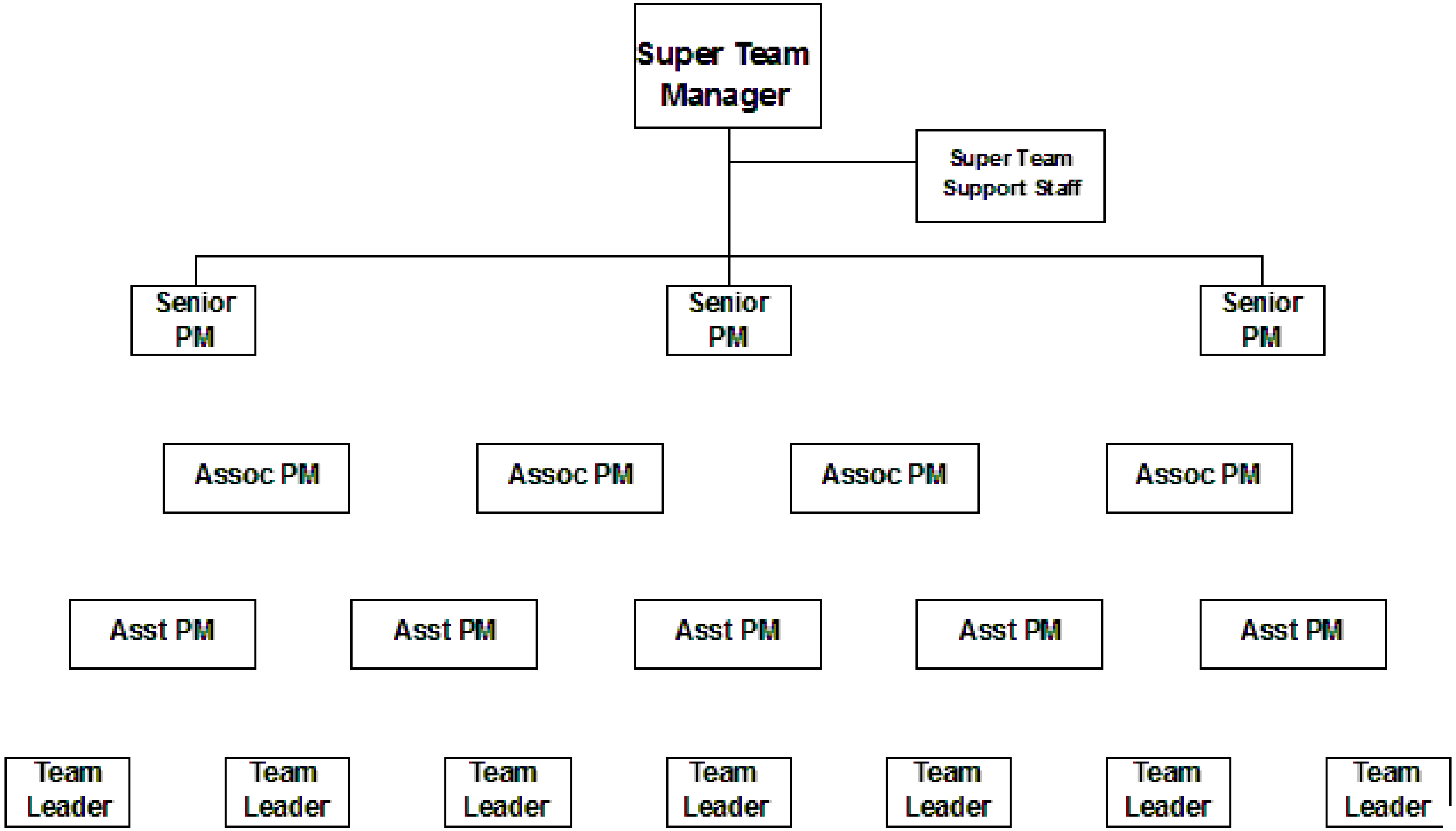
Super Team Definition

- A super team is a
  - temporary management structure used for a single project
  - that integrates several dependent project teams
  - into a single project team
  - managed by a senior level project manager.



Ch17: Organizing Multiple Team Projects

Super Team Structure



Super Team Manager

Super Team Support Staff

Senior PM

Senior PM

Senior PM

Assoc PM

Assoc PM

Assoc PM

Assoc PM

Asst PM

Asst PM

Asst PM

Asst PM

Asst PM

Team Leader

Team Leader

Team Leader

Team Leader

Team Leader

Team Leader

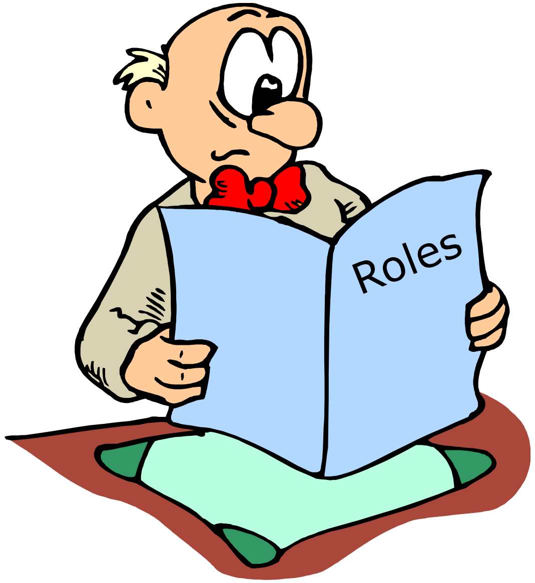
Team Leader

Figure 17-05

Ch17: Organizing Multiple Team Projects

Super Team Roles and Responsibilities

- Organize and manage the project
- Develop the project plan
- Maintain the overall project schedule
- Monitor and manage resource utilization
- Prepare and distribute project status reports
- Plan and conduct team meetings
- Process scope change requests



Super Team Strengths and Weaknesses

- Strengths
  - Managed from a single integrated source
  - Scales to larger projects
  - Integrated resource management control
  - Standardizes on a set of tools, templates, and processes
- Weaknesses
  - The difficulty in establishing standardization
  - Team members have to decide among competing priorities

Choosing a Management Structure

Project Characteristic	**Project Office**	**Core Team**	**Super Team**
Complexity/Risk			
# of customer areas			
# of Director/VP areas			
# of teams involved			
Project team size			
Type of project (new, update)			
Resource contention			
Criticality of deliverables			
Need for integrated plan			
Need for integrated schedule			
(other) Specify			

Effective Project Management: Traditional, Agile, Extreme

Managing Complexity in the Face of Uncertainty

Ch18: Managing the Professional Development of Project Teams

Presented by
(facilitator name)

EII

Summary of Ch18

- What career and professional development situation is being addressed?
- What do you need to do?
- What will you do?
- How will you do it?
- How will you know you did it?
- How well did you do?
- Where do you go from here? – A new idea to consider
- An even newer idea to consider

What career and professional development situation is being addressed?

- What do you need to do?
  - Experience acquisition
  - On-the-job training
  - Off-the-job training
  - Professional activities
- What will you do?
- How will you do it?
- How will you know you did it?
- How well did you do?

A New Idea to Consider – The PM/BA Position Family

- PM/BA Team Member
- PM/BA Task Manager
- PM/BA Associate Manager
- PM/BA Senior Manager
- PM/BA Program Manager
- PM/BA Director

NOTE: PM/BA denotes a position that emphasizes
PM but includes a BA component.
BA/PM denotes a position that emphasizes
BA but includes a PM component.

The PM/BA Landscape

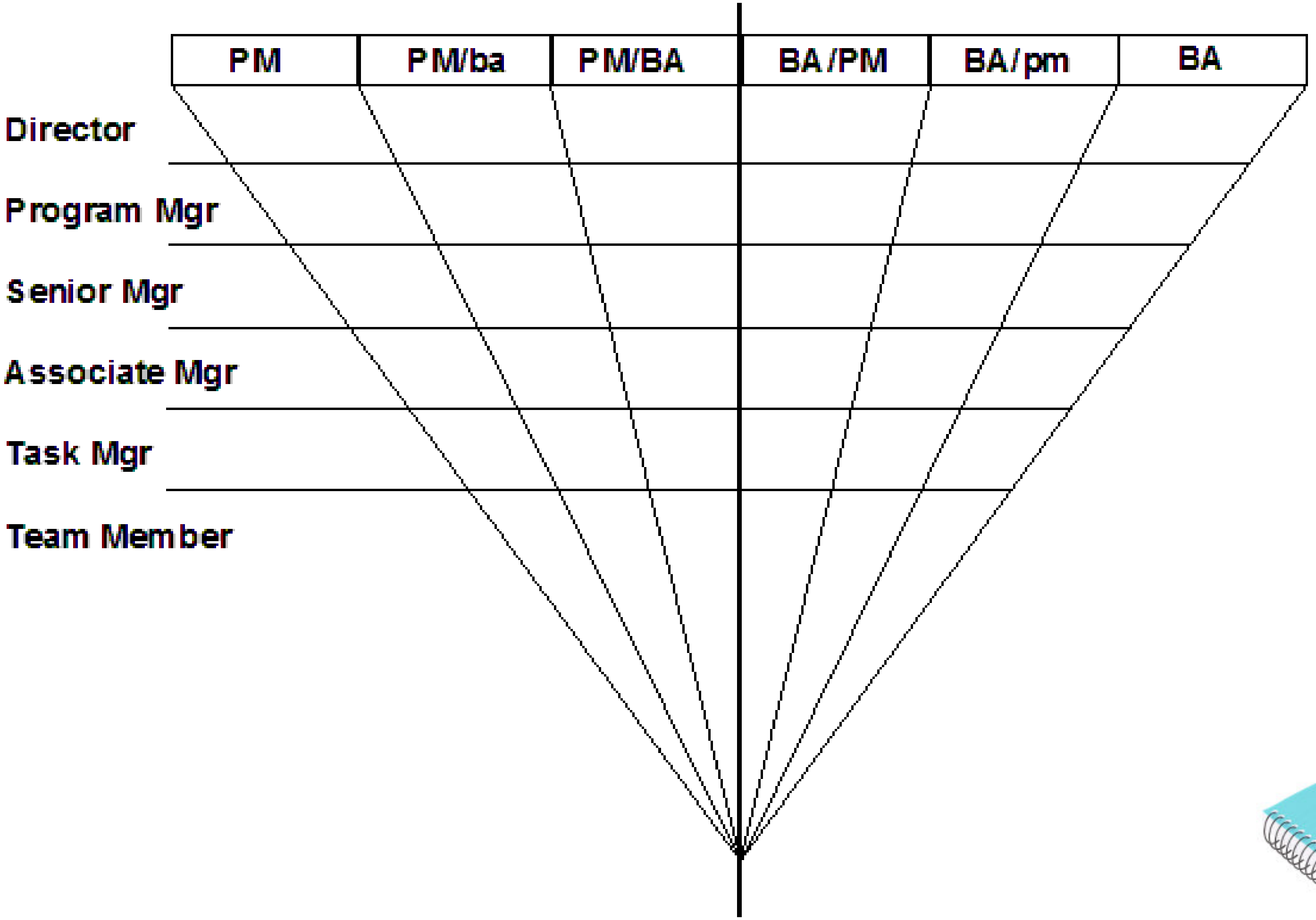
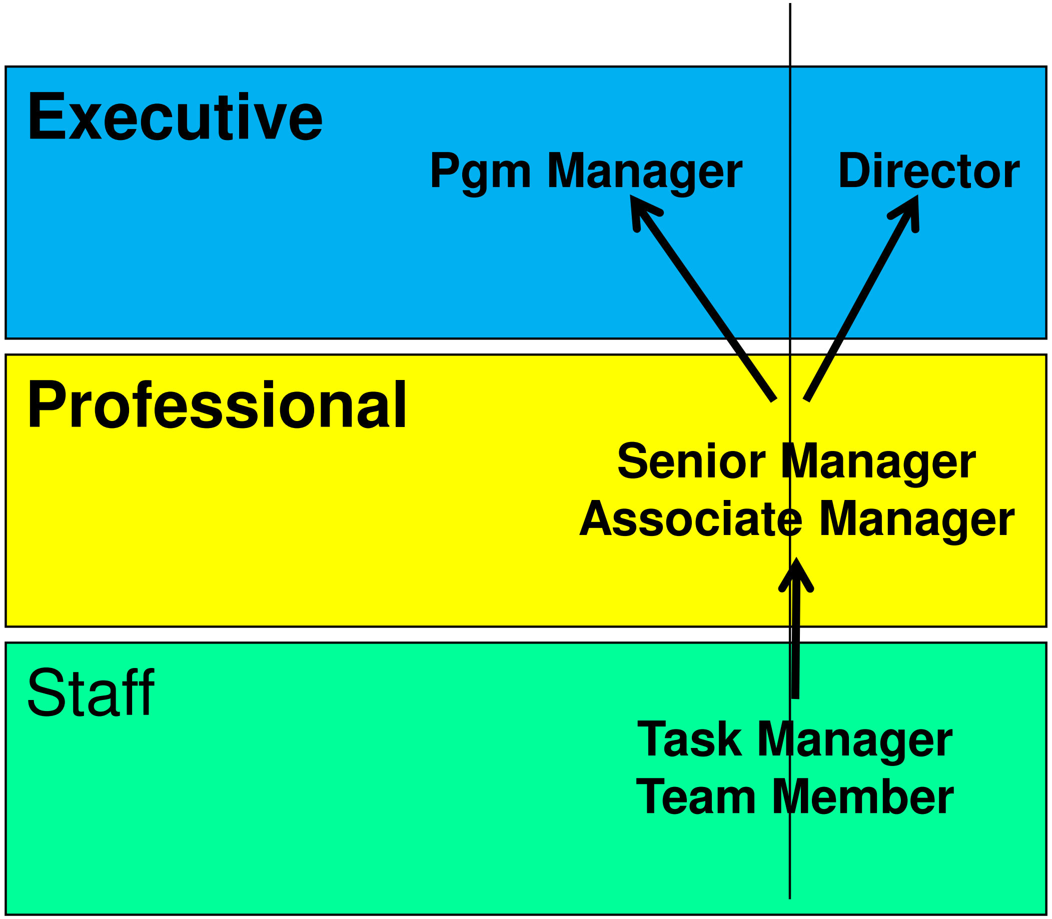


Figure 18-01

The BA/PM Position Family



Executive

Pgm Manager

Director

Professional

Senior Manager
Associate Manager

Staff

Task Manager
Team Member

Figure 18-02

The 4 Parts of a Professional Development Program

- Experience acquisition

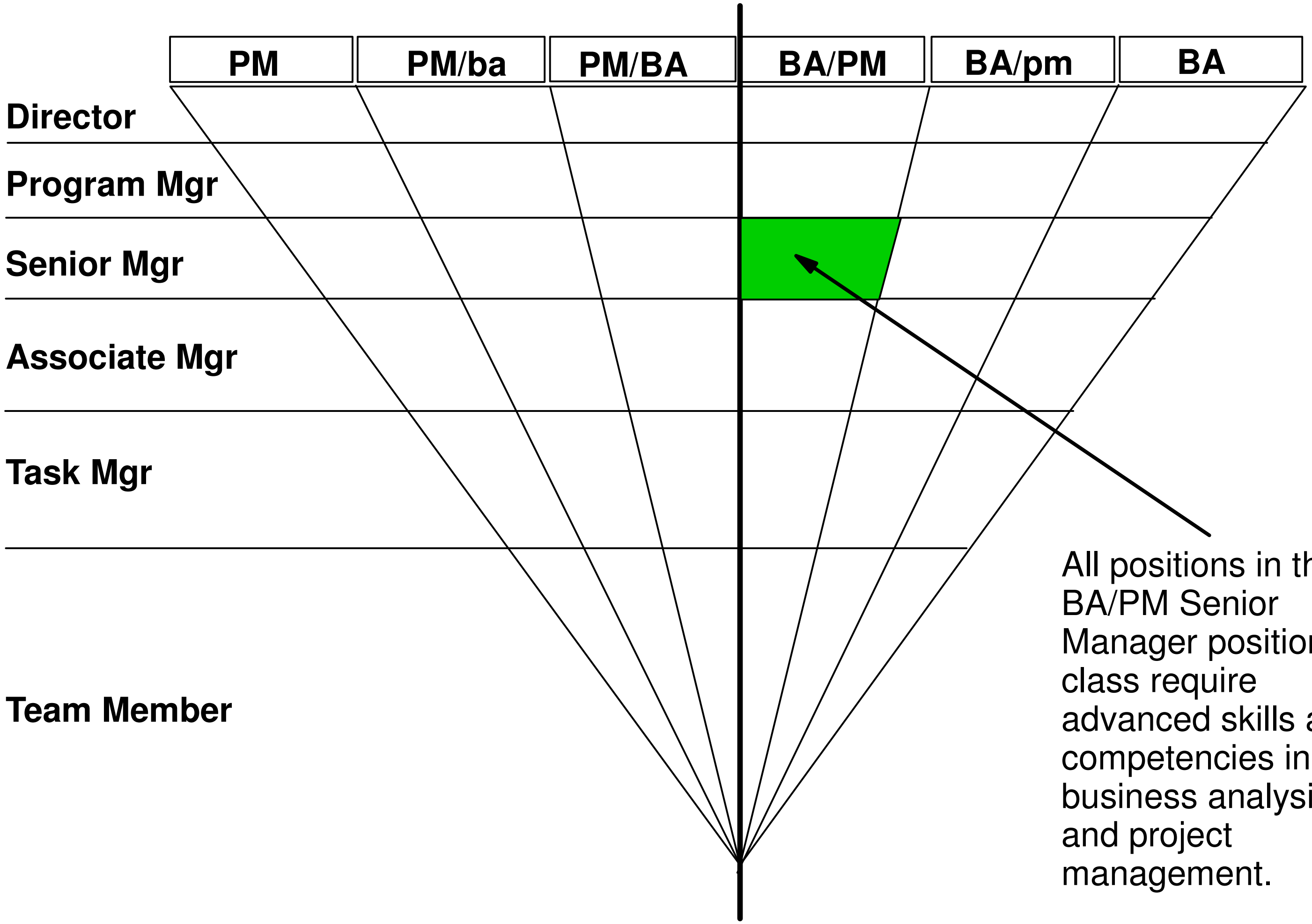
  Further experience mastering the skills and competencies needed in the current position
- On-the-job training

  Training to increase the proficiency of skills and competencies needed in the current position
- Off-the-job training

  Training to increase the proficiency of skills and competencies needed in the desired future position
- Professional activities

  A combination of reading, professional society involvement, conference attendance, and networking with other professionals

The New PM & BA Position Family Landscape



All positions in the BA/PM Senior Manager position class require advanced skills and competencies in business analysis and project management.

PM & BA Position Profiles

PM = PM with little or no business analyst skills or competencies

PM/ba = PM with minimal business analysis skills & competencies

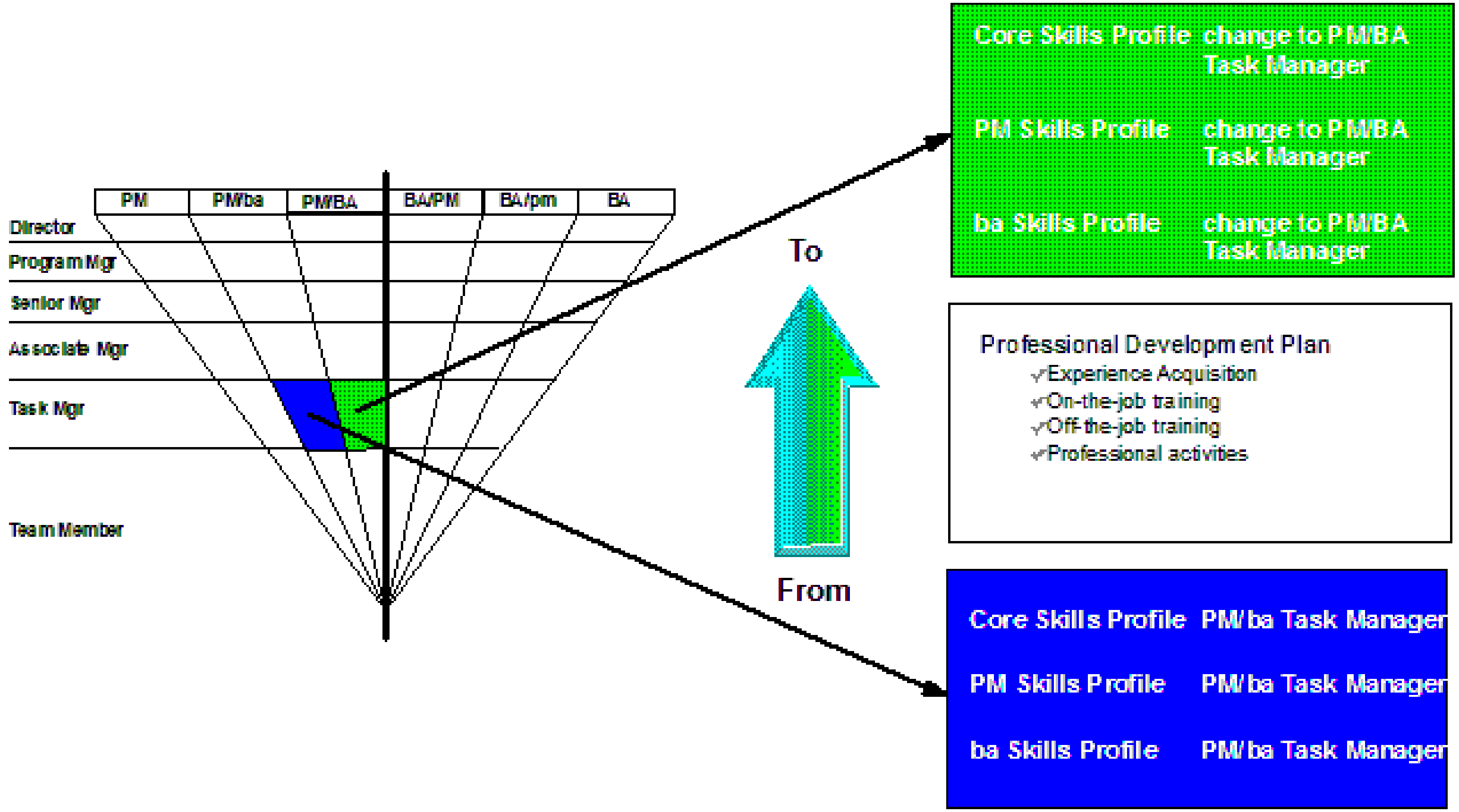
PM/BA = PM with advanced business analysis skills & competencies

BA/PM = BA with advanced project management skills & competencies

BA/pm = BA with minimal project management skills & competencies

BA = BA with little or no project management skills & competencies

PM/ba Task Manager to PM/BA Task Manager



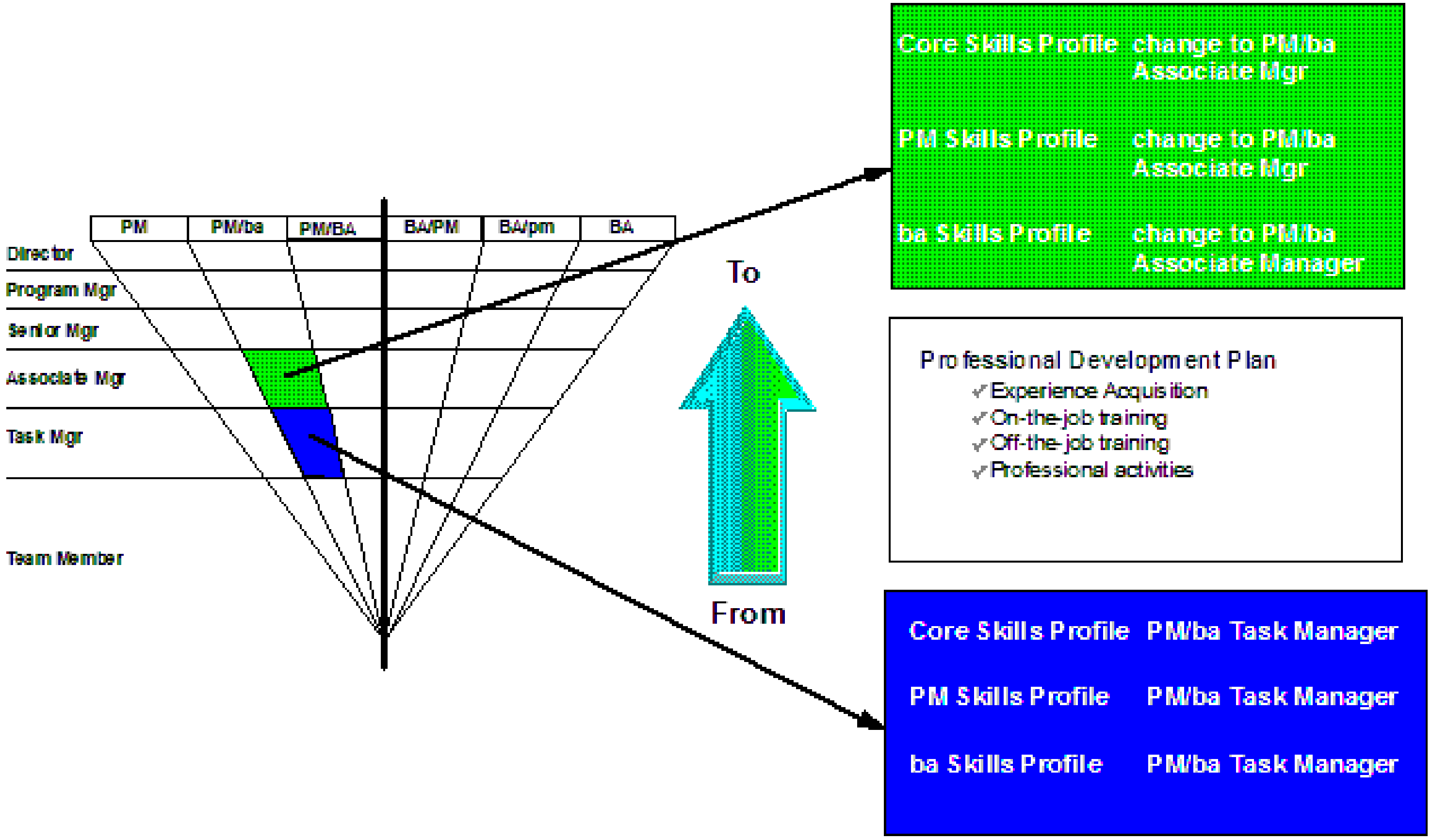
Core Skills Profile	change to PM/BA Task Manager
PM Skills Profile	change to PM/BA Task Manager
ba Skills Profile	change to PM/BA Task Manager

Professional Development Plan
- ✓Experience Acquisition
- ✓On-the-job training
- ✓Off-the-job training
- ✓Professional activities

Core Skills Profile	PM/ba Task Manager
PM Skills Profile	PM/ba Task Manager
ba Skills Profile	PM/ba Task Manager

Figure 18-03

PM/ba Task Manager to PM/ba Associate Manager



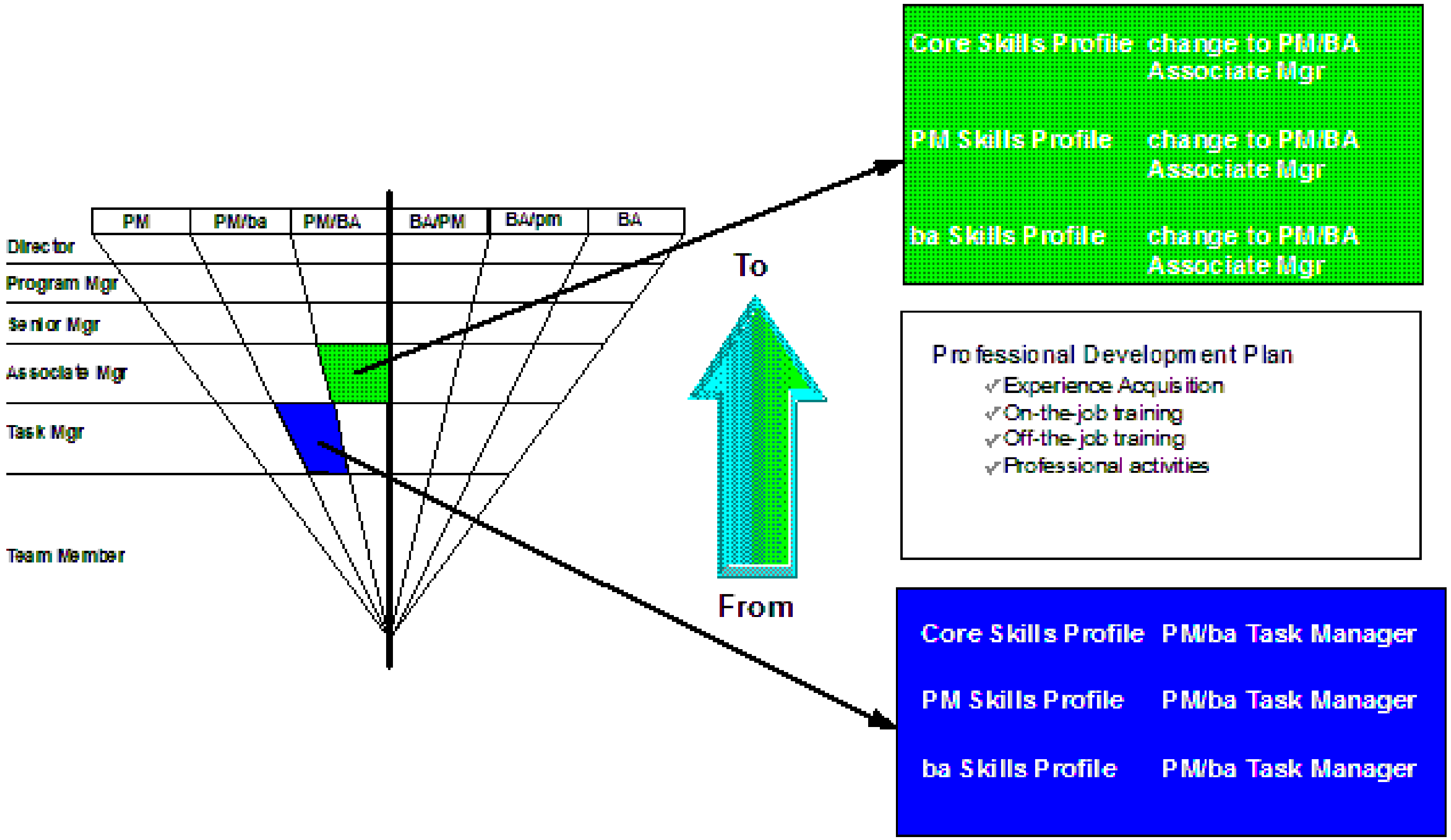
Core Skills Profile	change to PM/ba Associate Mgr
PM Skills Profile	change to PM/ba Associate Mgr
ba Skills Profile	change to PM/ba Associate Manager

Professional Development Plan
- ✓ Experience Acquisition
- ✓ On-the-job training
- ✓ Off-the-job training
- ✓ Professional activities

Core Skills Profile	PM/ba Task Manager
PM Skills Profile	PM/ba Task Manager
ba Skills Profile	PM/ba Task Manager

Figure 18-04

PM/ba Task Manager to PM/BA Associate Manager



Core Skills Profile	change to PM/BA Associate Mgr
PM Skills Profile	change to PM/BA Associate Mgr
ba Skills Profile	change to PM/BA Associate Mgr

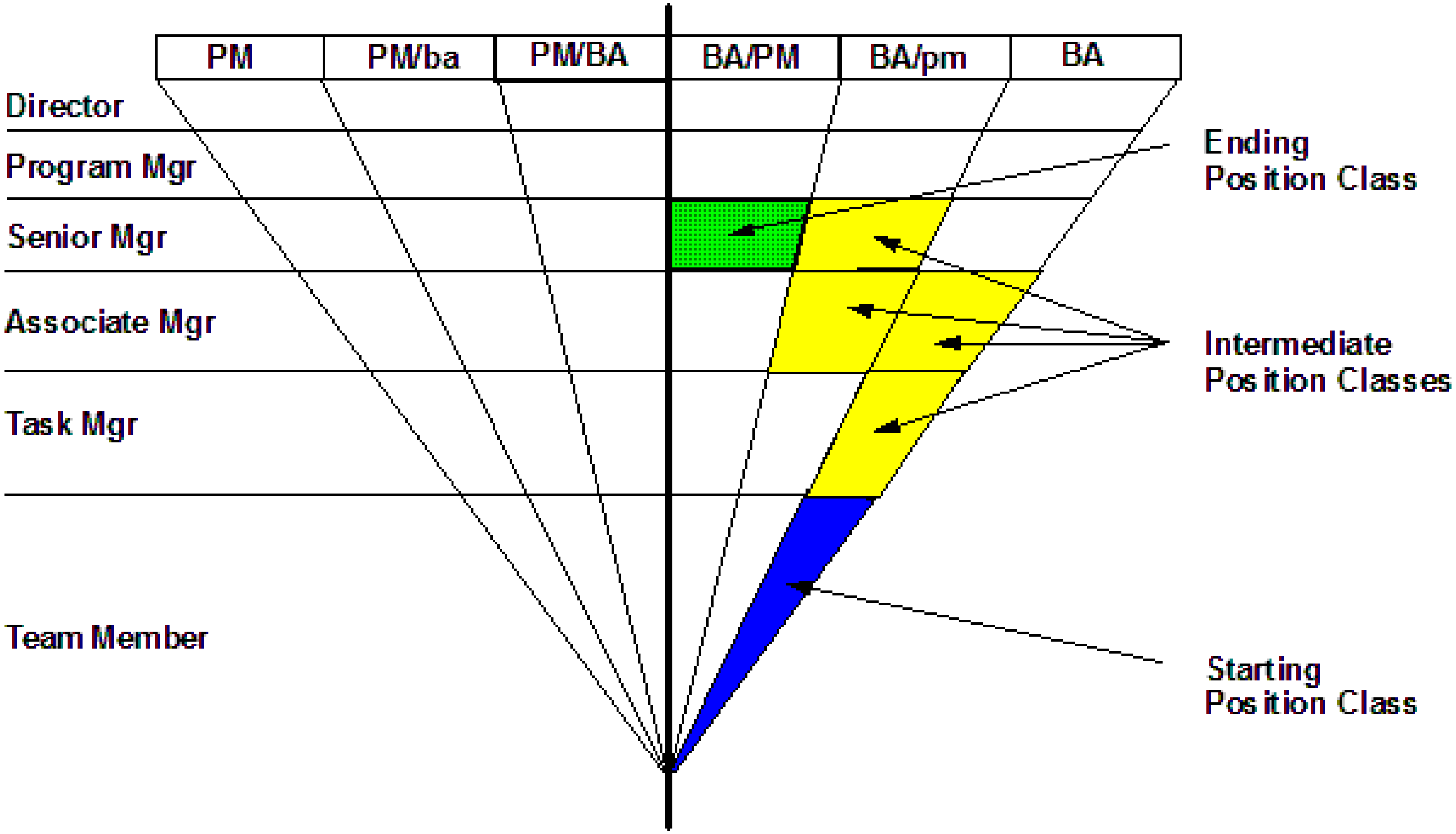
Professional Development Plan

- ✓Experience Acquisition
- ✓On-the-job training
- ✓Off-the-job training
- ✓Professional activities

Core Skills Profile	PM/ba Task Manager
PM Skills Profile	PM/ba Task Manager
ba Skills Profile	PM/ba Task Manager

Figure 18-05

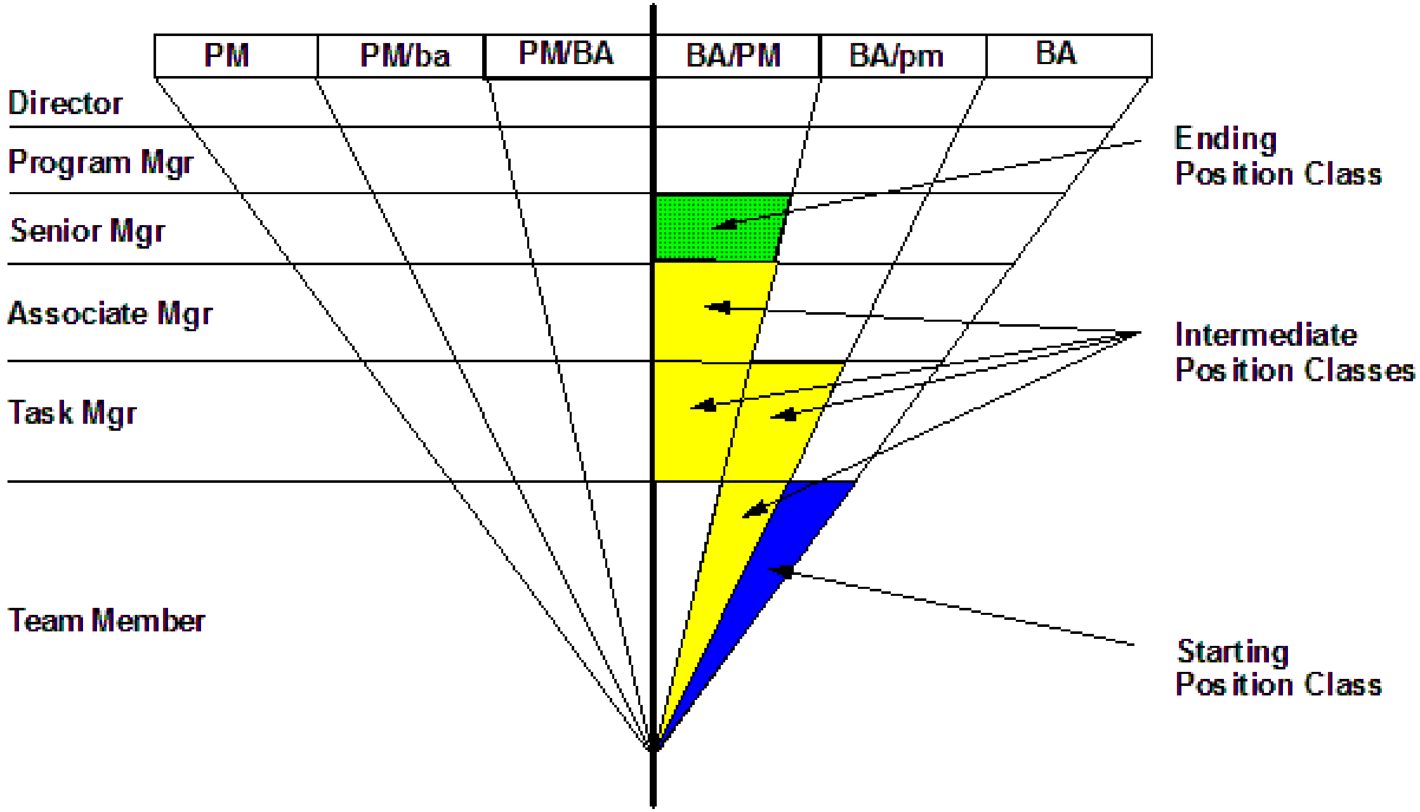
Career Path from BA Team Member to BA/PM Sr Mgr



BA Team Member to BA/PM Senior Manager

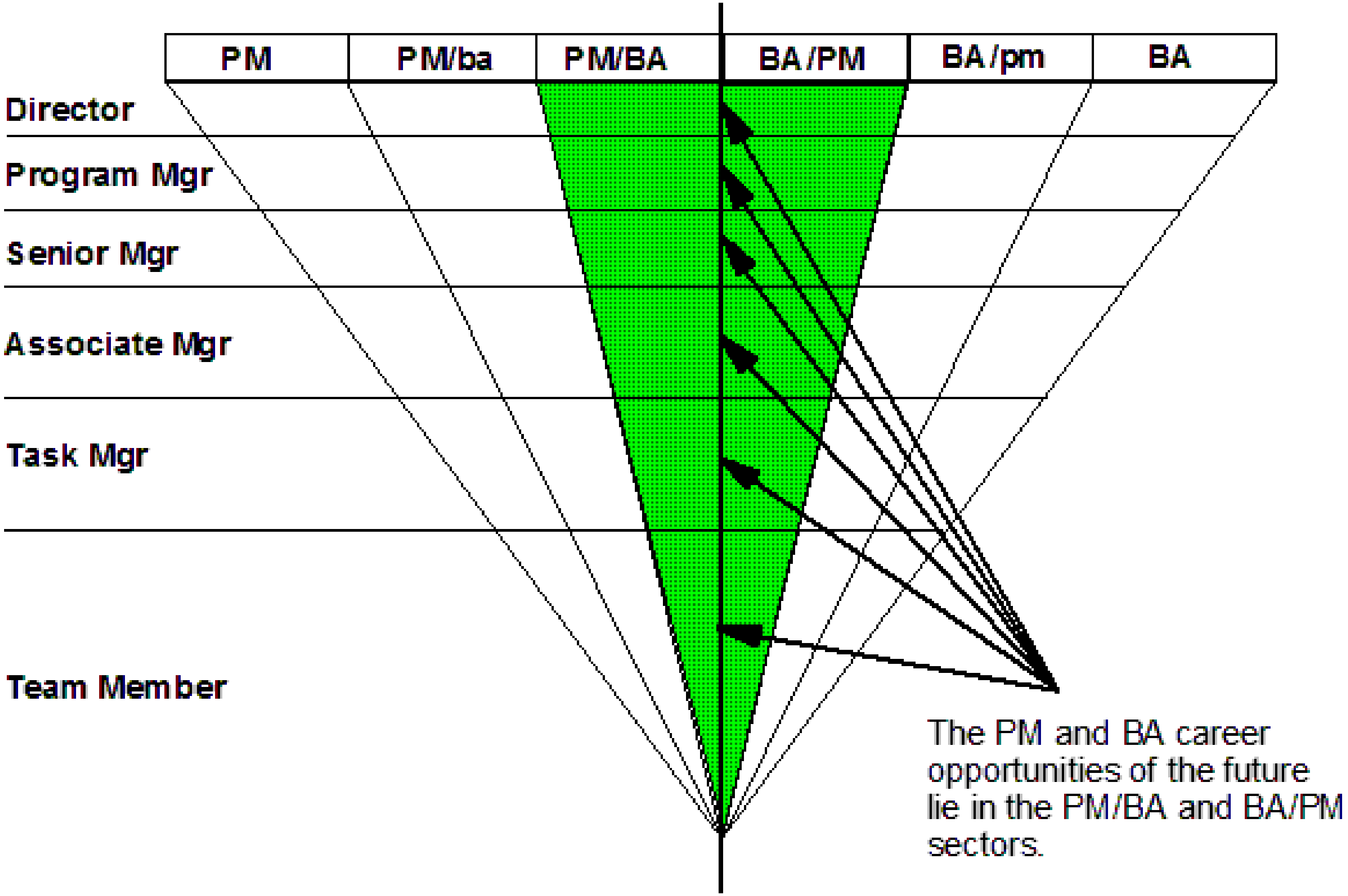
Figure 18-06

The PM & BA Landscape – A Smarter Career Path



BA Team Member to BA/PM Senior Manager

Career Opportunities for the New Professionals



The PM and BA career opportunities of the future lie in the PM/BA and BA/PM sectors.

An even newer idea to consider

The complex project manager of the future must possess the following disciplines:

- Project management (PM)
- Business analysis (BA)
- Business process management (BPM)
- Information technology (IT)

An even newer idea to consider – Why projects fail

Reason	PM	BA	BPM	IT
Lack of user input		X		
Incomplete Requirements and Specifications			X	
Changing Requirements and Specifications			X	
Lack of Executive Support	X			
Technology Incompetence				X
Lack of Resources	X			
Unrealistic Expectations			X	
Unclear Objectives			X	
Unrealistic Time Frames	X			
New Technology				X

Table 18-01

An even newer idea to consider – Future RASCI matrix

Project Phase	Deliverable	PM	BA	BPM	IT
Scoping	Problem Definition	R	R	C	C
	Solution Validation	R	R	C	C
	Project Overview Statement	R/A	S	A	I
	Requirements Elicitation	S	R	A	I
Planning	PMLC Selection	R/A	S	S	C
	Work Breakdown Structure	R/A	S	S	S
	Project Plan	R	S	S	C
Launching	Team Operating Rules	R	I	I	I
	Requirements Change Request	S	R	A	I
	Scope Change Management	R	C	A	I
	Risk Management	R	S	I	I
Monitoring/Controlling	Performance Reporting	R	S	I	S
	Communications Management	R	S	I	I
Closing	Acceptance Test Procedure	C	R	A	S
	Deliverables Installation	R	S	A	S
	Post-Implementation Audit	R	S	S	S

R = Responsible, A = Approves, S = Supports,
I = Informs, C = Consults

Table 18-02